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NOAA Technical Memorandum NMFS



ESTIMATES OF THE CATCH AND EFFORT BY FOREIGN TUNA LONGLINERS AND BAITBOATS IN THE FISHERY CONSERVATION ZONE OF THE CENTRAL AND WESTERN PACIFIC, 1965-77

Marian Y. Y. Yong and Jerry A. Wetherall

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INTRODUCTION

Since passage of the Fishery Conservation and Management Act (FCMA), there has been an increasing need for information on the fishing activity of foreign vessels in the U.S. Fishery Conservation Zone (FCZ) and other areas of U.S. interest. A knowledge of foreign catch and fishing effort is essential for analysis of management policies, for appraisal of fishery development potentials, and for planning of fishery surveillance and enforcement activities.

In the case of billfishes, foreign catches in the FCZ are made by tuna longline vessels of Japan, Taiwan, and the Republic of Korea. The vessels usually direct their effort toward tunas and catch billfishes only incidentally. The primary purpose of this report is to summarize available information on the nominal effort and the catch of tunas and billfishes by these foreign longline fleets in the FCZ of the central and western Pacific during the period 1965-77. In addition, the report presents estimates of the effort and tuna catch by Japanese baitboats fishing around Hawaii, Guam, the Northern Marianas, and other U.S. possessions.

In the following section the data sources and their characteristics and limitations are described. Then the data summarization and estimation procedures are discussed. Finally, the tables of resulting catch and effort statistics are presented, and suggestions are given for improving and updating the information.

DATA SOURCES

The estimates of foreign catch and effort were based on a variety of statistical sources. In this section the sources are systematically identified and described. For reference purposes a data set name is assigned to each source (Table 1).

Japanese Tuna Longline Statistics by 1° Square
[Data Set D1]

This data set consists of records of Japanese tuna longline nominal effort (hooks fished and days fished) and associated catches of tuna and billfish species (number of fish) by month and 1° square. It covers only those 1° squares in the central and western Pacific overlapping the FCZ in Hawaii, American Samoa, and Guam, and only the years 1971-75. The data are unpublished, and were made available to the National Marine Fisheries Service (NMFS) by the Fisheries Agency of Japan. The data were provided in unraised form; estimates of total catch and effort in each time-area stratum were made by multiplying the sample data by raising factors taken from appropriate issues of "Annual Report of Effort and Catch Statistics by Area on Japanese Tuna Longline Fishery" published by the Fisheries Agency of Japan.

¹Under the FCMA, the U.S. claims jurisdiction over billfishes in the FCZ, but not over tunas.

Japanese Tuna Longline Statistics by 5° Square [Data Set D2]

This data set consists of the well-known published statistics of monthly catch and effort by Japanese tuna longliners in 5° square areas. It is available throughout the range of the Japanese fleet in the Pacific for 1962-77. The data are published in the reference cited above. The catch and effort totals for a 5° square are equal to the sum of these statistics over all 1° squares in the 5° block, i.e., data set D2 may be considered an aggregation of data set D1. The statistics are published in raised form since 1967, and unraised form for the earlier years.

Taiwanese Tuna Longline Statistics by 5° Square [Data Set D3]

This data set contains monthly statistics on catch of tunas and billfishes (number of fish and weight of fish) and effort (hooks fished) of Taiwanese high-seas longliners by 5° square throughout the range of the fleet. Data for 1967 through 1977 are available, provided to us by the Taiwan Fisheries Bureau. Unraised sample statistics were provided by Taiwan and then raised. Annual summaries of the unraised statistics and raising factors are published by the Taiwan Fisheries Bureau in "Annual Catch Statistics of Taiwan's Tuna Longline Fishery."

American Samoa Tuna Longline Statistics [Data Set D4]

This unpublished data set contains the catch (number of fish) and effort (hooks fished and days fished) by sampled Taiwanese, Korean, and Japanese longliners based at Pago Pago and operating primarily in the South Pacific. The statistics are extracted from logbooks of daily fishing activity submitted by vessel captains to the Office of Marine Resources of the Government of American Samoa, and are available for the period 1960 through 1976. The logbook records give daily effort and catch by species along with the midday position of the vessel. Not all vessels submit logbooks, so raising factors are necessary to project the sample catch and effort to the entire fleet. Computation of raising factors is facilitated by a second set of data for vessels based at Pago Pago. These are the records of cannery landings made available to us by Star-Kist Samoa, Inc. and Van Camp Sea Food Co. They provide direct estimates of the tonnage of fish landed by all vessels, those appearing in the logbook statistics and those not covered in the catch and effort sampling.

Japanese Baitboat Statistics [Data Set D5]

This data set consists of catch and effort records of the Japanese baitboat fleet operating in the central and western Pacific. Catch (in metric tons) and nominal effort (vessel days) are published annually by

²Data for 1977 and 1978 are available, but are incomplete, so catch and effort estimates are possible only through 1976.

the Fisheries Agency of Japan in "Annual Report of Effort and Catch Statistics by Area, Japanese Skipjack Baitboat Fishery." The published records are given by 1° square and 10-day interval. In our analysis we used summaries by month and 1° square for the years 1970-77. On the average, the baitboat statistics cover about 80% of the actual catch and effort, so we raised the statistics by a factor of 1.25.

PROCEDURES AND ASSUMPTIONS

Boundaries

Figure 1 shows the boundaries we used for computing catch and effort within the FCZ around the Hawaiian Islands, American Samoa, Guam, the Northern Mariana Islands, and the various minor U.S. possessions, e.g., Wake Island, Johnston Atoll, Howland Island, Baker Island, Kingman Reef, Palmyra Island, and Jarvis Island. Boundaries are essentially as given in the Federal Register (vol. 42(44)-7 March 1977; vol. 43(7)-11 January 1978), except that we included Kingman Reef as a U.S. territory, and we assumed straight-line closures around parts of Jarvis Island, Howland Island, and Baker Island. Similarly, we drew a provisional boundary (dashed line) around the northern and northeastern part of the American Samoa FCZ (including Swains Island) and assumed a median-line separation between American Samoa and the Tokelau Islands.

The provisional boundaries drawn here were adopted to provide a basis for catch computations only. They are not to be construed as legal limits, nor do they prejudice any U.S. position regarding disputed claims or jurisdictional conflicts in the Pacific.

In addition to computing catches of tunas and billfishes and nominal effort within each of the 200-mile zones, or within the entire FCZ areas, we also computed these statistics for other more restricted zones around Hawaii, American Samoa, Guam, and the Northern Mariana Islands (Figures 2, 3, and 4). The boundaries adopted in these cases were selected primarily for illustrative purposes, and are not intended to reflect any preference with respect to fishery management policy. For the Hawaiian Islands, the chain was split into the main Hawaiian Islands and the Northwestern Hawaiian Islands (NWHI), with the dividing line at 161°W longitude (between Niihau Island and Nihoa Island). Catches and effort were computed within 50 miles, 100 miles, and 200 miles of the islands in each sector (Figure 2).

In the case of Guam, the Northern Mariana Islands, and American Samoa, a 50-mile zone was drawn and catches and effort were estimated for these zones as well as for the entire FCZ (Figures 3 and 4).

Apportioning

Estimates of nominal effort and the catch of tunas and billfishes were made by adding up the appropriate statistics for all 1° squares or 5° squares, or parts thereof, falling within the boundaries of the area of interest. In instances where the boundary of an area cut through a square, the distribution of catch and effort within the square was assumed to be homogeneous, and a part of the square's catch and effort was added to the area totals according to the proportion of the square falling within the area boundaries.

One-degree square statistics (D5) were used to estimate effort and catch of Japanese baitboat vessels around the Hawaiian Islands, Guam, and the Northern Marianas, and other U.S. possessions. One-degree square data were also used for Japanese longline catch and effort around Hawaii and Guam during 1971-75 (D1), and for all of the American Samoa longline catch and effort estimates (D4). In every other case 5° square statistics were used.

Raising Factors

The tuna longline fishery statistical systems of Japan and Taiwan are sampling systems, which means that there is not a complete enumeration or accounting of the catch and effort. Instead, only a sample of the logbooks from vessels operating in the Pacific is covered. The sample catch and effort statistics must be expanded to produce estimates of total catch and effort, using raising factors. Sampling coverage for Japanese tuna long-line vessels is relatively high (Table 2). Coverage is proportional to size of the vessel for Japan-based boats. The raising factors for Japanese statistics are available only on an annual and Pacific-wide basis.

In the case of Taiwanese longliners, raising factors are available monthly (Table 3), but for all sizes of vessels combined and for the entire Pacific until 1977. Beginning in 1977, factors were computed by month and 5° square. Coverage of Taiwanese vessels is very low, being generally less than 20%.

For vessels based at Pago Pago, coverage is variable. From 50 to 95% of the vessels landing at Pago Pago submit logbooks containing detailed statistics on catch and effort. Since 1970 Korean vessels have been covered more completely than longliners from Taiwan, and for vessels of both flags the coverage rate has decreased considerably from the levels maintained during the 1960's.

In our initial analyses we computed raising factors for American Samoa as the product of (1) estimated average weight, taken from Taiwanese longline data for the area, and (2) ratio of landings by all vessels to landings by those vessels included in the logbook sampling. However, when these factors were applied to the sampled numerical catches the resulting estimates of total catch in weight were in most cases less than the recorded total cannery landings. This could happen if our average weight estimates were too low, or the proportion of the catch actually landed and recorded in cannery records was greater for sampled longliners [those submitting logbooks] than for other vessels, or the logbook catch data for sampled vessels was incomplete. Since no detailed information was available for evaluating these possible sources of error, we carried out the catch and effort estimation in a different manner. First we adjusted the billfish landings during each quarter to account for billfish which were landed at one of the canneries but did not appear in the statistics available to us. adjustment was made assuming the ratio of billfish landings to tuna landings was the same at the two canneries. It was done separately for each vessel nationality. Next, the adjusted landings were multiplied by other correction factors to convert from dressed weights to round weights. These correction factors were 1.15 for yellowfin tuna, 1.16 for bigeye tuna, 1.2 for billfishes, and 1.0 for albacore and wahoo. Then, final correction factors were

computed by year, species (except billfishes were combined), nationality, and cannery as the ratios of total landings (adjusted as indicated above) to the corresponding total numbers of fish caught by the sampled vessels. These final factors were multiplied by the individual monthly catches in 1° cells (D4) and, after apportioning in the manner described above, the products were summed within each zone of interest. This procedure was followed for billfishes, albacore, yellowfin, bigeye, and wahoo. Thus for these species we assumed the total adjusted cannery landings were accurate and accounted for all fish caught. The remaining species are skipjack and bluefin tunas. These are very minor constituents of the catch and are neglected in the canneries' summary statistics. Therefore, for these species we estimated total catches in weight by simply multiplying the observed catches in number of fish by estimated average weights of 6.0 kg (skipjack tuna) and 52.6 kg (bluefin tuna).

The cannery statistics should account for virtually all tuna and billfish taken by the longliners based at Pago Pago, although small amounts which are not landed there may go unrecorded.

Adjustment factors were also used to estimate the total nominal fishing effort by American Samoa longliners. These were computed by nation, cannery, and year as the ratio of total vessel days of fishing by all vessels covered in the statistics of cannery landings to the number of vessel days fished by longliners appearing in the logbook sampling.

As mentioned in an earlier section, a raising factor of 1.25 was used to expand the sample Japanese baitboat catch and effort statistics.

Average Weights

The basic longline catch statistics of data sets D1, D2, D3, and D4 are expressed in number of fish taken. (Weight of catch is also reported by Taiwanese longliners (data set D3), but this information was available to us only in aggregate form.)

Longline catches in weight for Hawaii, Guam, the Northern Marianas, and minor U.S. possessions were estimated by multiplying catch in number by appropriate values of average weight. The average weight statistics came from two sources:

- (1) Average weights for catches in the Hawaiian FCZ and around Johnston Atoll were based on annual statistics from the Hawaiian domestic longline fleet, provided by the United Fishing Agency, Ltd. of Honolulu, Hawaii and the Hawaii Division of Fish and Game (Table 4).
- (2) The average weights of tunas and billfishes taken elsewhere by longliners of Taiwan and Japan were estimated from data obtained from the Fisheries Agency of Japan and from publications of the Taiwan Fisheries Bureau (Table 5).

Accuracy

Assuming the basic statistics we used are correct, the accuracy and reliability of our catch and effort estimates depend on two main conditions: (1) homogeneity of catch and effort distribution within the smallest spacetime stratum under consideration, and (2) uniformity of sample coverage in time and space.

The first condition does not generally hold, as may be demonstrated by comparing estimates based on 5° square data with corresponding estimates based on 1° square statistics. A 5° breakdown of catch and effort statistics is simply too coarse for an accurate, detailed spatial analysis of fishing activity within the FCZ. Estimates based solely on 5° square data should therefore be viewed circumspectly.

Even greater problems are created by departures from the second condition. The use of a common ocean-wide raising factor may be perfectly adequate for ocean-wide estimates, but may lead to serious distortion in estimates of catch and fishing effort in small subareas of the ocean. Steps have recently been taken by the Taiwan Fisheries Bureau to improve their sampling system so that individual raising factors are available by month and 5° square.

Considering these factors, it is obvious that one cannot put a great deal of confidence in some of the catch and effort estimates. Nevertheless, these estimates are the best currently available.³

THE CATCH AND EFFORT TABLES

The estimated nominal effort and catch statistics are presented in Tables 6 through 91. Catches are stated in metric tons (mt). Effort is given in vessel days. In the case of Taiwan longline effort outside the American Samoa area, the effort figures were estimated by dividing the number of hooks fished by 2,000, which is approximately the average number of hooks fished per vessel day. In other cases effort was computed directly. An asterisk in the effort section denotes effort greater than zero but less than 1 vessel day. An asterisk in the catch columns means some fish were caught but less than 1 mt.

³A similar report has been released by the South Pacific Commission, Noumea, New Caledonia. See: Klawe, W. L. 1978. Estimates of catches of tunas and billfishes by the Japanese, Korean, and Taiwanese longliners from within the 200-mile economic zone of the member countries of the South Pacific Commission; SPC Occasional Paper No. 10

Longline catch estimates are presented for the following species:

albacore Thunnus alalunga yellowfin tuna T. albacares bigeye tuna T. obesus bluefin tuna4 T. thynnus skipjack tuna Katsuwonus pelamis blue marlin Makaira nigricans black marlin M. indica Tetrapturus audax striped marlin Xiphias gladius swordfish sailfish Istiophorus platypterus shortbill spearfish T. angustirostris

In addition, catches of wahoo, Acanthocybium solandri, are given for the longline vessels based at Pago Pago. Note that all tables of longline catches give a combined estimate of the catch of sailfish and shortbill spearfish, since these species are not separated in the records submitted by either Japanese or Taiwanese longline fishermen, or in the logbook records of foreign vessels based at American Samoa.

The Japanese baitboat catch estimates are given for albacore, yellowfin, bigeye, bluefin, and skipjack. In addition, catches of frigate tuna, <u>Auxis thazard</u>, and miscellaneous species (others) are estimated.

IMPROVING ESTIMATES

We have identified several possible shortcomings in the estimates of catch and effort within specified geographical areas. The estimates may be improved by (1) using more detailed longline statistics than the usual 5° square summaries which are now generally available. In the case of longline vessels based at Pago Pago daily fishing logs are available to But the official, published longline statistics of Taiwan, Japan, and Korea are only by 5° square. More detailed Japanese data are available in unpublished form; (2) using more detailed raising factors, instead of the Pacific-wide factors now employed. Taiwan has taken steps to refine this aspect of their longline catch estimation -- it would be useful if other nations also instituted such improvements; (3) using more accurate statistics on average weight. Temporal and spatial variation should be taken into account, and better size statistics should be sought from unpublished sources; (4) a more complete analysis of the American Samoa-based fishery. The estimates given here reflect only the landings reported by the two tuna canneries operating in Pago Pago. The records available to us do not take into account small amounts of fish landed and sold through other channels. A more extensive study of American Samoa fishery statistics should be undertaken so that a complete accounting can be made of all fish caught or landed in that area of the FCZ.

⁴In the case of vessels based at American Samoa, the negligible bluefin catch is mostly southern bluefin tuna (<u>T. maccoyii</u>) taken in the southern extremity of the South Pacific albacore grounds.

The estimates reported here do not present a complete picture of foreign tuna and billfish catches in the FCZ, since except for American Samoa-based vessels no Korean statistics were considered. Korean tuna longliners (mostly sashimi boats) are known to fish in all areas of the FCZ, and while extensive catch and effort data are available, we are not yet able to answer key questions about appropriate raising factors, sampling procedures, and reliability. Until such considerations can be dealt with, we will refrain from using the Korean longline statistics.

In addition to problems with the Korean longline statistics we have been unable to evaluate possible Korean baitboat catches in the FCZ. No information is available to us on this subject.

Mention should be made of fishing inside the Hawaii FCZ by longline vessels based in American Samoa. Such catches, mainly by Korean boats, are minor, but the frequency of such visits has been increasing in recent years. Information on this subject is being compiled for publication in a separate report.

A comment is also needed concerning the possibility that some small catch in the American Samoa FCZ is made by longliners not based in Pago Pago and therefore not monitored in the American Samoa logbook system. Catches by Japanese vessels can be ruled out, since Japanese Government statistics show no effort in that area by her vessels since 1971. But the question remains unanswered for Taiwan and Korea.

Finally, the published catch and effort records examined in this analysis do not cover any Japanese baitboats or longliners under 20 gross tons, or any Taiwanese longliners under 50 gross tons. This is of no consequence except around Guam and the Northern Marianas, where some small Taiwan-based Taiwanese longliners and small Japanese longliners may be operating. Also neglected are any Japanese purse seine catches of tunas in this area; however, these are negligible, as most purse seine activity is south of this region.

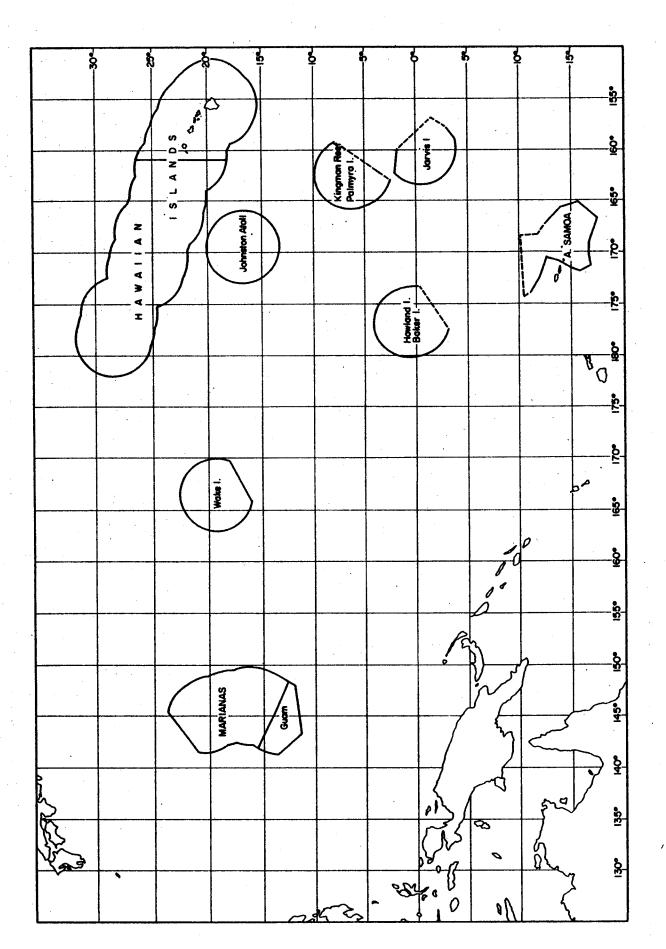


Figure 1.--Boundaries of the Fishery Conservation Zone around Hawaii, American Samoa, Guam, the Northern Mariana Islands, and other U.S. possessions, [See text for explanation.]

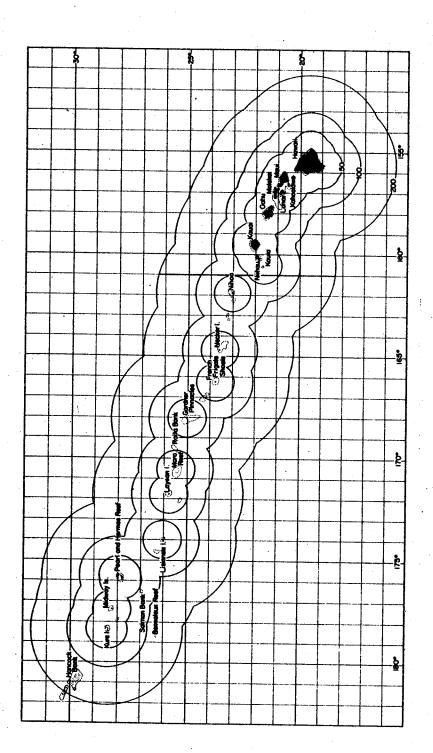


Figure 2.--The 50-, 100-, and 200-mile zones around the Hawaiian Islands.

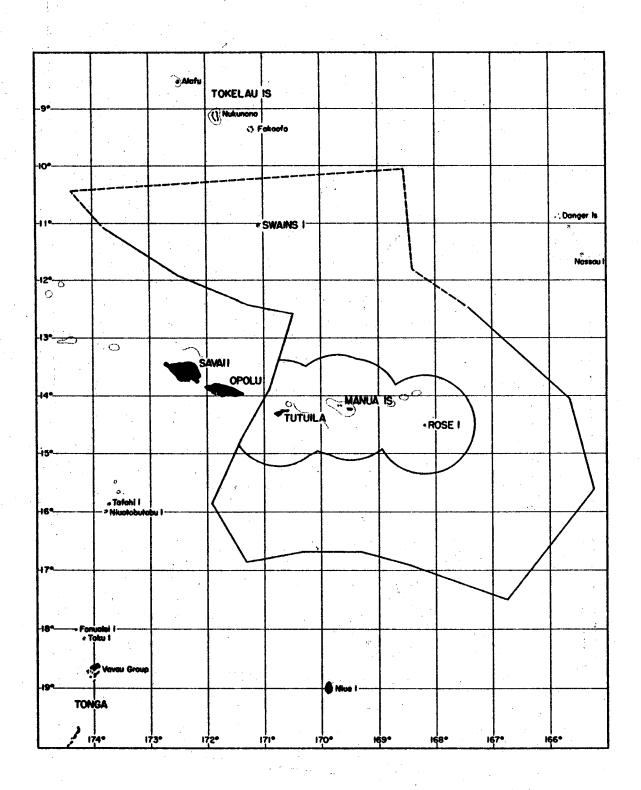


Figure 3.--The 50-mile limits and the Fishery Conservation Zone around American Samoa.

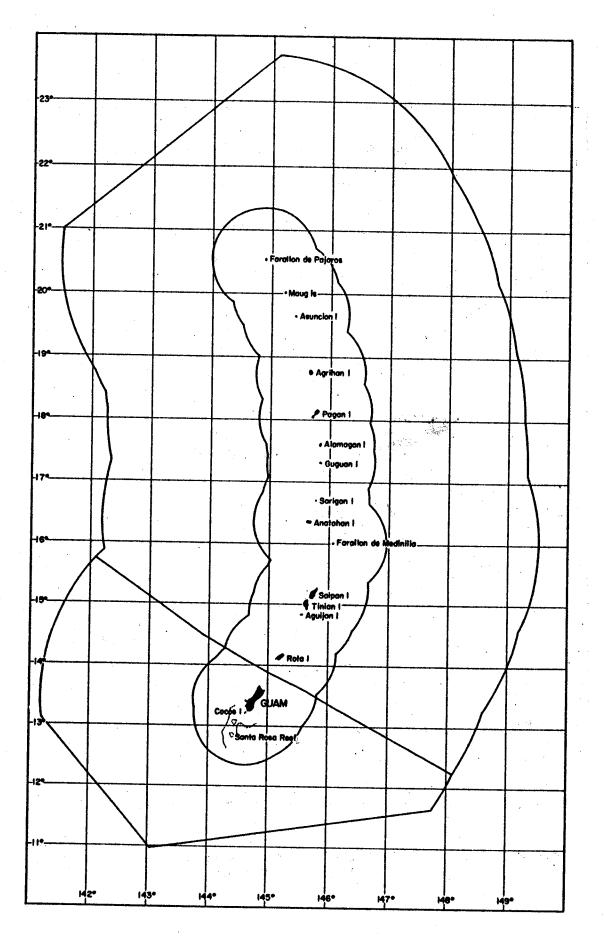


Figure 4.--The 50-mile limits and the Fishery Conservation Zone around Guam and the Northern Mariana Islands.

Table 1.--Description of data sets.

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Source of data	Fisheries Agency of Japan (Unpublished)	"Annual Report of Effort and Catch Statistics by Area on Japanese Tuna Longline Fishery," published by Fisheries Agency of Japan	"Annual Catch Statistics of Taiwan's Tuna Longline Fishery," published by Taiwan Fisheries Bureau	Office of Marine Resources, Government of American Samoa (Unpublished)	Van Camp Sea Food Co., Star-Kist Samoa, Inc. (Unpublished)	"Annual Report of Effort and Catch Statistics by Area, Japanese Skipjack Baitboat Fishery," published by Fisheries Agency of Japan.
Spatial and temporal detail	l° square, by month, size of vessel, bait type	5° square, by month, size of vessel, bait type	5° square, by month	By midday position for each sampled vessel based at Pago Pago	By month	<pre>1° square, by 10-day inter- val, effort by vessel tonnage class</pre>
Year available	1971–75	1962-77	1967–77	1960–76	1954–76	1969–77
Nationality	Japan	Japan	Taiwan	Japan, Taiwan, Korea		Japan
Type of data	Sample catch (number of fish) by species; nominal effort (hooks, vessel days)	Catch (number of fish) by species; nominal effort (hooks, vessel days)	<pre>Catch (number of fish) by species; nominal effort (hooks)</pre>	Catch (number of fish) by species; nominal effort (hooks, vessel days)	Landings (pounds) at Pago Pago by species (tuna), or combined (billfish); nominal effort (vessel days)	Sample catch (metric tons) by species; nominal effort (vessel days)
Data set	D1	D2	D3	7		20

Table 2.—Hundreds of vessel days of nominal effort (top figures) and appropriate raising factors (bottom figures) for Japanese tuna longline vessels, 1965-77.

	. J		ed vessel tons)	.s	Motherships with	Foreign-based vessels
Year	20-50	50-100	100-200	> 200	catcher boats	(Pacific)
1965	718	- 4	42 -	425	22	101
	1.41	1.99	1.99	1.24	1.27	2.01
1966	621	- 5	15 -	473	9	90
	1.27	1.81	1.81	1.18	1.17	1.30
1967	745	266	196	395	7	105
	1.68	2.10	1.44	1.19	1.14	1.94
1968	616	242	209	417	. 7	59
	1.74	2.02	1.50	1.26	1.16	1.51
1969	579	278	237	472	18	30
	2.10	1.93	1.67	1.16	1.21	2.34
1970	395	292	205	527	16	29
	1.73	1.74	1.39	1.02	1.08	2.45
1971	316	344	198	519	3	22
	2.12	1.81	1.48	1.22	1.63	5.70
1972	211	385	178	613	1	15
	2.43	2.04	1.47	$1.18 \\ 1.23$	1 1.75	1.30
1973	151	463	157	682	4	4
	2.24	1.95	1.72	1.13 1.44	1.13	1.75
1974	124	594	124	628	1	0
	2.25	1.84	1.47	$\{1.16, 1.28\}$	1.20	
1975	98	612	93	509	2	0
	1.84	1.71	1.42	$1.13 \\ 1.32$	1 1.00	***
1976	95	663	118	735	3	0
	1.35	1.25	1.10	$1.13 \\ 1.10$	1 1.00	00 %
1977	80	675	112	700	1	. 0
	1.23	1.20	1.24	1.04	1 1.00	

¹Upper raising factor is for vessels landing in Shizuoka and Kochi Prefectures. Lower factor is for other vessels.

Table 3.--Raising factors for Taiwan's tuna longline statistics (Pacific Ocean).

	1967	1968	1969	1970	1971	1972	1973	1974	1075	1076
	1307	1900	1303	1970	19/1	19/2	19/3	1974	1975	1976
January	9.09	3.48	6.21	4.27	2.36	4.40	4.36	7.15	16.37	9.53
February	9.09	3.48	6.21	4.53	2.47	3.67	5.73	7.26	12.25	9.53
March	9.09	3.48	6.21	3.91	2.73	4.59	6.21	10.15	7.61	9.53
April	9.09	3.48	6.21	3.55	2.34	3.89	8.25	10.48	6.21	8.04
May	9.09	3.48	6.21	3.83	3.23	4.58	7.62	7.54	5.90	8.04
June	9.09	3.48	6.21	3.04	3.23	5.05	5.84	8.86	4.54	8.04
July	9.09	3.48	6.21	2.43	3.20	3.91	6.65	8.77	4.37	8.98
August	9.09	3.48	6.21	2.44	3.42	3.98	8.31	14.24	5.26	8.98
September	9.09	3.48	6.21	2.70	3.03	4.62	5.49	13.42	4.46	8.98
October	9.09	3.48	6.21	2.56	4.47	3.78	5.57	13.33	5.56	11.71
November	9.09	3.48	6.21	2.43	3.51	3.85	5.13	11.30	6.06	11.71
December	9.09	3.48	6.21	2.67	4.05	4.18	6.05	11.93	6.83	11.71

Note: Raising factors for 1977 were computed by month and 5° square. However, at the time this table was prepared, monthly ocean-wide averages were not available. The annual average raising factor for the Pacific was 3.84 for 1977, indicating a considerable improvement in sampling coverage.

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Table 4.--Estimated average weights (kg) used in computing longline catches in the FCZ around the Hawaiian Islands and Johnston Atoll. (From data supplied by Hawaii Division of Fish and Game and United Fishing Agency.)

Year	Year Albacore	Yellowfin tuna	Bigeye tuna	Bluefin tuna	Skipjack tuna	Blue marlin	Black marlin	Striped marlin	Swordfish	Sailfish and spearfish
1965	25	65	97	200	9	89	65	29	84	16
1966	77	20	54	200	9	115	65	25	84	16
1961	24	51	20	200	5	102	65	28	84	16
1968	26	52	45	200	5	92	65	30	84	15
1969	25	20	47	200	4	06	65	30	84	16
1970	25	48	77	200	4	83	65	28	84	16
1971	25	47	43	200	5	26	65	30	84	16
1972	56	87	45	200	7	89	. 65	32	84	17
1973	23	67	8,	200	9	70	65	56	84	18
1974	24	67	39	200	S	99	65	28	84	16
1975	23	45	43	200	7	77	65	28	84	17
1976	26	20	94	200		88	65	30	84	16
1977	25	67	97	200	5	68	65	29	84	16

Table 5.--Estimated average weights (kg) used in computing longline catches in the FCZ around Guam, the Northern Marianas, and some other U.S. possessions in the Pacific. (From data supplied by Fisheries Agency of Japan and Taiwan Fisheries Bureau.)

Year A	Albacore	Yellowfin E	Bigeye tuna	Bluefin Stuna	Skipjack tuna	Blue	Black marlin	Striped marlin	Swordfish	Sailfish and Spearfish
Guam an	d Northe	Guam and Northern Marianas								
1975	25	28	38	237	'n	55	62	34	30	22
1976	77	30	39	237	Ŋ	55	79	34	30	22
1977	24	30	37	237	5	55	79	28	30	22
Other	24	29	38	237	٧٦	55	79	32	30	22
Wake Island	land									
1975	26	30	39	184	ιŊ	20	79	30	33	28
1976	27	35	43	184	κż	20	79	30	33	28
1977	27	35	42	184	S	56	91	22	39	28
Other years	27	33	41	184	in.	52	83	27	35	28
Howland	Island,	Baker Island,	i, Palmyra	ra Island,	, Kingman	Reef,	and Jarvis	s Island		
All years	18	25	27	53	٠.	47	09	39	26	25

Table 6.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1965.

	Hawa I	Hain Ian Island	s (A)		orthwester Ian Island:		Hawa I I a	Total n Islands	(A + B)
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml
			,	Month1y	nominal e	ffort ¹			
January	16	7	. 4	56	30	12	74	37	16
February	16	7	3	27	. 5	ŧ	45	12	4
March	5	2	4	61	21	7	66	23	8
April	19	8	. 3	45	27	t o	64	35 -	13
May	169	66	30	291	147	53	460	213	83
June	47	26	12	412	218	75	459	244	87
July	0	. •	0	80	46	1,8	80	46	18
August	17	6	3	9	2	•	26	8	3
September	2	1	•	3	•	÷	5	1	•
October	2 .	1	•	77	35	14	79 ်	36	14
November	9	3	1	iis	22	7	122	25	8
December	61	25	12	153	39	16	214	64	28
Total	367	152	69	1327	592	213	1694	744	282
				An	nual catch	2			
Albacore	6	3	2	133	19	7	139	22	9
Yellowfin	131	54	25	330	158	59	461	212	84
tuna Bigeye	330	122	55	412	133	49	742	255	104
tuna Bluefin	3	1,	1	3	2	1	6 ,	3	2
tuna Skipjack tuna	2	: t	1	7	•	t	9	. 5	2
Total tunas	472	101	84	885	316	117	1357	497	201
				An	nual catch	2			
Dive	54	25	11	245	126	45	299	151	56
marlin Striped	113	54	25	775	406	145	688	460	170
marlin Swordfish	5	,3	ŧ	67	24	9	72	27	10
Black	2	t.	•	5	2	1	7	. 3	1
marlin Spearfish & sallfish	10	•	2	24	12	•	34	16	6
Total billfishes	184	87	39	1116	570	204	1300	657	243

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 7.—Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1966.

	Hawa I	Main Ian Island	s (A)		orthwester Ian Island		Hawa I I a	Total In Islands	(A + B
	200 ml.	100 ml.	50 m1.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 mi
				Honthly	nominal e	ffort ¹			
January	9	2	•	62	5	2	71	7	, 3
February	20	5	1	88	20	12	108	33	13
larch	20	7	3	35	11	4,	55	18	7
April	60	22	10	. 7		t	67	23	. 11
lay	33	11	. 5	115	55	20	148	66	25
June	168	59	24	22	1.0	3	190	69	27
July	30	10	. 3	2 .	1	•	32	11	3
Augus t	0	0	0	2	1	1	2	-1	t
September	6	1	, t .	66	. 4		72	. 5	2
October .	•	2	1	90	7	t -	94	9.	2
November	2	t	•	- 131	16	5	133	17	5
December	t	t	•	108	6	1	109	. 7	1
Total	353	121	49	728	145	51	1081	266	100
	•			A	nnual catc	h ²		٠	•
Albacore	1	•	•	256	24	•	257	24	8
Yellowfin	67	21	9	102	17	,6	169	38	15
tuna Bigeye	502	164	64	487	58	19	989	222	83
tuna Bluefin	.0	• •	• •	. 1	•	0	1	•	0
tuna Skipjack tuna	, 3	·	• .	•	2	3	7	3	1
Total tunas	573	166	73	850	101	34	1423	287	107
				A	nnuel cato	h²			
Blue	77.	27	11	50	14	5	127	41	16
marlin Striped	44	15	7	118	36	13	162	53	20
marlin Swordfish	9	. 3	1	83	10	. •	92	13	5
Black	•	•	•	2	1	.•	3	1	•
marlin Spearfish & sailfish	9	3	1	10		1	19	5	2
Total billfishes	140	46	20	263	65	23	403	113	43

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 8.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1967.

	Hawal	Hain ian island	is (A)		orthwester ian island		Hawa 1 I a	Total n Islands	(A + B)
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 mi
			• .	Monthly	nominal	effort ¹			
January	1	0	0	140	14	4	141	14	4
February	10	2	•	83	8	2	93	10	2
March	26	9	• • •	69	11	4	95	20	8
Apr11	51	22	10	144	71	27	195	93	37
May	354	179	96	115	56	21	469	235	117
June	173	60	38	156	84	29	329	164	67
Juty	24	9	. •	16	5	2	40 %	14	6
Augus t	1	ı		10	•	. 1	11	5	1
September	2	t	1	38	1	•	40	2	i
October	4	1	t	53	6	2	57	7	3
November	20	6.	2	179	55	21	199	61	23
December	9	2	ı	73	12	5	82	14	6
Total	675	312	157	1076	327	118	1751	639	275
	•			A	nnual catc	h²			
Albacore	12	6	3	436	47	14	448	53	17
Yellowfin	90	45	23	148	64	24	238	109	47
tuna Bigeye	678	262	117	570	145	54	1248	407	171
tuna Bluefin	0	•	0	t	•	. 0	. 1	•	0
tuna Skipjack tuna	. 2	1	•	2	1	•	4	2	•
Total tunas	782	314	143	1157	257	92	1939	571	235
			:	A	nnual cato	:h²			
Blue	112	53	27	85	41	15	197	94	42
marlin Striped	244	140	77	379	176	65	623	316	142
marlin Swordfish	28	15	·, 8	147	27	9	175	42	1,7
Black	2	`1	t	1		• ,	3	. 2	
marlin Spearfish & sallfish	22	11	6	10	4	. 2	32	15	
Total bilifishes	406	220	119	622	249	91	1030	469	210

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 9.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1968.

	Hawa I	Main Ian island	s (A)	N Hawa I	orthwester Ian Island	n s (B)	Hawa i i a	Total n islands	(A + B)
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml
			:	Monthly	nominal s	ffort ¹			
anuary	12	4	2	198	43	16	210	47	18
ebruary	26	10	4	183	45	16	209	55	20
arch:	33	15	7	134	76	32	167	91	39
pr11	382	137	57	57	33	12	439	170	69
lay	237	106	49	413	234	85	650	342	134
une	146	76	40	171	87	29	319	165	69
luly	3	2	1	26	15	6	29	17	7,
lugus t	0	0	0	•	0	0	0	0	0
September	2	•		35	1	•	37	t	
)ctober	12	3	1	113	28	9	125	31	10
lovember	47	23	10	268	114	43	315	137	53
Jecember	72	29	13	146	36	13	218	65	26
lotel	974	409	184	1744	712	261	2718	1121	445
			,	Α	nnual catcl	h²			
						52	668	157	 57
Albacore	22	10	5	646	147			214	56
Yellowfin tuna	217	94	43	232	120	43	449		
Bigeye tuna	658	241	100	726	246	89	1364	487	169
Bluefin tune	0	0	0	. 1	•	, •	1	•	•
Skipjeck tuna	2	1	•	. 4	1	1	6	2	.e 1
Total tunas	899	346	146	1609	514	185	2508	860	333
			······································		Annual cato	h ²			
Blue	112	46	20	125	63	23	237	109	: . 43
merlin Striped	477	211	97	629	334	121	1106	545	218
merlin Swordfish	19	9	4	247	110	47	266	119	51
Black	2	1	. •	2	1	•		2	•
merlin Spearfish & sailfish	25	. 11	5	28	15	6	53	26	11
						····		801	323

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 10.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1969.

	Hawal	Hain tan Island	s (A)		orthwester Ian Island		Hawal 1	Total in Islands	(A + 8
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml.	200 m1.	100 mf.	50 m
				Monthly	nominal	ffort ¹			
January	111	40	17	253	78	30	364	118	47
ebruary	49	24	11	333	126	46	362	150	59
larch	43	. 16	7	41	9	3	84	25	10
Apr11	41	15	6	. 4	2 .	1	45	17	. 7
lay	89	39	15	65	40	15	154	79	33
Juna	23	10	5	16	10	. 4	41	20	. 9
Juty	. 14	5	2	* ,	•	0	14	5	2
August	13	. • •	2	0	o	• •	13	4	2
September	77	27	11	48	7	2	125	34	13
October	58	16	7.	175	54	16	233	72	25
November	126	44	18	180	47	17	306	91	35
December	67	30	- 13	244	69	27	331	99	40
Total	731	272	117	1361	442	165	2092	714	282
				A	nnual catc	h ²			• .
Älbacore	22	7	3	512	90	33	534	97	36
Yellowfin	184	71 .	32	199	82	31	363	153	63
tuna Bigeya	727	263	112	1181	409	157	1908	672	269
tuna Bluefin	0	•	0	5	1	•	5	1.5	•
tuna Skipjack tuna	1	•	•	2	. 1	•	3	t	•
Total tunes	934	341	147	1 699	563	221	2633	924	368
				A	nnual cato	h ²			
Blue	59	22	9	26	12	4	85	34	13
mariin Striped	124	49	21	144	66	25	268	117	46
merlin Swordfish	18	7	3	143	42	16	161	49	19
Black	1	•	•	1	•	• ,	2	•	•
marlin Spearfish & sallfish	7	3	1	4	2	t .	11	5 .	2
Total billfishes	209	61	34	316	124	46	527	205	80

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 11.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1970.

	Hawa I	Main ian islands	(A)		orthwester Ian Island		Hawa I I	Total an Islands	(A + B
er tylif maethariae	200 ml.	100 ml.	50 ml.	200 mt.	100 ml.	50 ml .	200 m1	. 100 ml.	50 ml
		* 3 *	\$ 150, th 1	Monthly	nominal e	ffort ¹	8.1		
anuary	76	22	7	234	71	26	310	93	33.
ebruary	135	41	15	100	15	•	235	56	19
larch	53	19	9	38	9	3	. 91	28	12
hpril	30	7	2	10	4	1	40	11	3
lay	110	49	21	299	⁸⁾ 148	48	409	197	69
lune	128	52	21	231	141	52	359	193	73
luly	73	32	15	70	41	15	143	73	30
\ugus t	47	21	11	8	3	1	: 55	24	12
September	15	•	2	1	ह। •	8	16	• .	2
October	80	32	15	179	90	33	259	122	48
lovember	77	26	10	384	173	64	461	199	74
December .	156	74	34	616	298	114	772	372	148
lotal .	98.0	379	162	2170	993	361	3150	1372	523
*					nnual catch	n 2 .			
Albacore	42	16	7	416	110	40	458	126	47
Yellowfin	511	200	85	720	384	140	1231	584	225
tuna Bigeye	664	228	90	1061	453	168	1725	681	258
·tuna Bluefin	1	1	•	3	· •	•	•	2	
tuna Skipjack	2	1	•	4	2	1	6	3	1
tuna									
Total tunas	1220	446	182	2204	950	349	3424	1396	531
		· · · · · · · · · · · · · · · · · · ·			nnual catc	h ²			
Blue	117	50	22	329	177	63	446	227	85
marlin Striped	214	93	41	753	398	143	967	491	184
marlin Swordfish	26	: 10	4	123	38	13.	151	48	17
Black	1	•	•	3	. 2	1	***	2	1
marlin Spearfish 6 sailfish	23	9	4	52	29	10	75	38: -	10
	, 383	162	71	1260	644	230	1643	806	301

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 12.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1971.

	Hawa I	Hain ian island	le (A)	Hawa I	lorthwester Ian Island:	(B)	Hawa I I a	Total Hawaiian islands (A + B)			
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml		
		٠		Monthly	nominal e	ffort ¹					
January	146	42	10	505	236	110	65 t	278	128		
February	113	15	2	285	79	20	398	94	22		
Merch	5	2	•	42	12	5	47	14	5		
April	3	. •	. 0	3	2 .	1	6	2	1		
Hay	16	ť	0	33	25	3	49	26	3		
June	5	t	•	61	42	12	66	43	12		
July	. 9	. 2	0	28	2	1	37	4	1		
Augus t	10	2	. 0	0	0	0	18	2			
September	13	•	0	42	17	. 9	55	17	9		
October	105	18	5	118	42	18	223	60	23		
November	49	6	•	234	147	72	283	. 153	72		
December	60	31	12	202	102	28	270	133	40		
Total	550	120	37	1553	706	279	2103	826	316		
	•			An	nual catch ²	!					
Albacore	39	6	•	398	104	29	437	112	33		
Yellowfin tuna	271	48	14	467	236	91	736	284	105		
81 geye	428	54	15	821	375	148	1249	429	163		
tuna Bluefin	•	. 0	0	1	•	0	1	•	0		
tuna Skipjack tuna	1	•	•	2	1	•	3	1	•		
Total tunas	739	110	33	1689	716	268	2428	826	301		
				An	nual catch ²	: .		·			
Blue marlin	33	6	2 .	81	46	17	114	52	19		
Striped marlin	62	17	6	261	169	76	323	186	82		
Swordfish	8	1	•	63	. 24		68	25	8.		
Black marlin			1	•	3	. t	6	4	2		
merin Spearfish & sailfish		. 1	•	. 6	•	1	12	.	1		
Total billfishes	106	26	9	417	246	103	523	272	112		

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 13.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1972.

	Hawa I	Main Ian Island	ls (A)		orthwester Ian Island		Hawalla	Total n Island	s (A + 8
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 m
				Monthly	nominal è	effort ¹			
January	22	6	2	205	30	3	227	36	5
ebruary	56	6	•	135	14	. 2	191	20	2
larch	32	8	4	216	23	2	248	31	6
April	5	1	0	2	0	0	7	t	0
lay	43	11	4	154	54	2	197	65	6
lune	: 1 8	1	0	65	41	2	83	42	2
. · July	7	0	0	0	0	0	7	0	0
Augus t	. 8	0	0	20	2	•	28	2	•
September	13	2	1	• •	0	0	13	2	1
October	60	25	9	102	38	16	162	63	25
lovember	10	5	2	94	37	17	104	42	19
December	88	55	22	704 ~. 1,	308	116	792	363	138
lotal .	362	120	44	1697	547	160	2059	667	204
				Ä	nnual catc	h²			
Albacore	44	28	12	478	80	15	522	108	27
Yellowfin	118	51	19	260	1 06	15	378	157	34
tuna Bigeye	261	52	18	1284	445	164	1545	497	162
tuna Bluefin	• .	0	0	2	•	0	2	•	0
tuna Skipjack tuna	1	•	•	2		•	3	1	•
Total tunes	424	131	49	2026	6.32	194	2450	763	243
				A	unnual cato	:h²			
Blue	15	3	t	62	31	3	77	34	
marlin Striped	23	9	3	173	79	12	196	66	15
marlin Swordfish	12	3	•	192	36	6	204	39	•
Black	1.	•	0	2	2	1	3	2	1
marlin Spearfish & sailfish	5	1	•	8	1	*	13	2	•
Total billfishes	56	16	4	437	149	5.5	493	165	20

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 14.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1973.

	Main Hawalian Islands (A)			Hawa I	Northwestern Hawallan Islands (B)			Total Hawalian islands		
	200 ml.	100 ml.	50 ml.	200 ml.	100 mi.	50 mi.	200 ml.	100 ml.	50 mi	
				Monthly	nominal e	ffort ¹				
January	47	16	8	297	129	58	344	145	66	
February	58	7	2	47	16	11	105	23	13	
March	45	•	0	58	10	3	103	10	3	
April	13	0	0	11	5	1	24	5	1	
May .	83		o	62	8	•	145	9	•	
June	42	3	0	39	5	*	61	8		
July	. 7	7	5	3	2	1	10	9	6	
August	3	0	0	2	1	•	5	1	•	
September	1	0	0	5	•	0	6	•	•	
October	45	19	11	67	27	12			0	
November	63	14	1	138	55		112	46	23	
December	185	25	2	234	63	22	201 419	69 88	24	
Total	592	92	29	963	321	131	1555	413	160	
				And	nual catch ²					
Albacore	115	10	3	348	117	48	463	135	51	
Yellowfin tuna	181	34	12	133	34	8	314	68	20	
Bigeye tuna	45 t	32	9	496	175	65	947	207	74	
Bluefin tuna	0	. 0	0	2	•	0	2	•	0	
Skipjack tuna	1	•	•	. 1	•	•	2	•	•	
Total tunes	748	84	24	980	326	121	1728	410	145	
				Anr	nual catch ²					
Blue	15	3	1	16	4	ı	33	7	2	
marlin Striped	36	7	3	78	24	в	116	31	11	
marlin Swordfish	14	3	2	89	16	5	103	19	7	
lack .	•	•	0	. 1	•	•	1	•	•	
marlin ipearfish	13	1	•	10	. 2	•	23	3	•	
6 sailfish								•	•	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 15.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1974.

	Hawai	Main lan Island	s (A)	N Hawa I	orthwester Ian Island	n is (B)	Hawaiia	Total in Islands	(A + B	
	200 ml.	100 ml.	50 mi.	200 mi.	100 ml.	50 ml.	200 ml.	100 ml.	50 m1	
				Monthly	nominal	ffort ¹				
January	213	58	15	150	86	52	363	144	67	
February	42	9	1	40	4	2	82	13	3	
1arch	5 L	25	6	37	i t	5 .	88	36	11	
April	16	2	0	10	4	1	26	6	1 .	
lay	93	1	0	3	1	•	96	2	•	
June	308	21	. 1	11	7	•	319	28	1	
July	187	12	. •	103	5	•	290	17	•	
Augus t	23	12	1	15	3	•	38	15	1	
September	15	1	0	14	0	0	29	1	0	
October	91	23	3	2	0	. 0	93	23	3	
November	78	27	10	18	. 1	•	96	26	10	
December	172	19	1	30	6	•	202	25		
fotal	1289	210	38	433	128	60	1722	336	98	
	Annual catch ²									
Albacore	173	35	•	261	94	46	454	129	50	
Yellowfin	332	63	12	119	36	26	451	99	36	
tuna Bigeye	715	92	14	95	30	15	810	122	29	
tuna Bluefin	0	0	. 0	2	**	•	2	•	<u> </u>	
tuna Skipjack tuna	2	•		1	•	•	3	•	•	
Total tunes	1222	190	30	498	160	87	1720	350	117	
				A	nnual cato	h ²				
Blue	59	9	2	24	3	•	63	12	. 2	
mariin Striped	50	13	3	20	5	1	78	18		
marlin Swordfish	22	3	•	45	10	•	67	13	•	
Black	2	•		1	•	•	3	•	•	
marlin Spearfish - 6 sailfish	38	7	t	7		• · · · · · · · · · · · · · · · · · · ·	45			
Total billfishes	179	32	6	97	19	5	276	51	11	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 16.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1975.

	Hawa I	Main Ian island	s (A)	N Hawa 1	orthwester Ian Island	rn is (8)	Hawa I I	Total en Island	s (A + B)
	200 ml.	100 ml.	50 ml.	200 ml.	100 mi.	50 ml.	200 ml	. (100 ml.	50 mi
				Monthly	nominal	sffort ⁱ			
January	92	12	•	69	42	23	161	54	23
February	56	· 5	•	52	33	11	118	36	11
March	8	3	•	33	28	, 11	41	31	11
April	2	. 0	0	0	. 0	0	2	0	0
Hay	39	0	. 0	0	•	0	39	0	. 0
June	19	•	0	25	3	1	44	. 3	
July	13	0	, 0	16	· t	o	31	1	. •
August	10	3	0	•	t	0	14	4	0
September	3	ø	0	0	0	0	3	•	0
October	, ý	6	5	152	141	111	159	147	116
November	13	13	11	214	191	111	227	204	122
December	7,0	4	•	261	1.40	74	331	144	74
Total	342	46	16	628	580	342	1170	626	358
				Ar	nual catc	h²		,	
Albacore	79	8 -	1	170	65	34	249	73	35
Yellowfin	81	7	1	171	115	69	252	122	70
tuna Bigeye	145	24	. 15	512	392	242	657	416	257
tuna Bluefin	0	o	. 0	2	2	t	2	2	1
tuna Skipjack tuna	1 ,	• .	• ,	1	•	*	2	•	•
Total tunes	306	39	17	856	574	346	1162	613	363
-				A	nnual cate	:h²			
Blue	6	1		14	6	4	20	7	•
marlin Striped	23	3	1	70	46	18	93	49	19
meriin Swordfish	7	•	0	27	9	•	34	. 9	•
Black	•	•		. 1	. 1	•	1	1.	•
merlin Spearfish & sellfish	7	•	•	7	•	2	14	•	2
Total billfishes	43	4	1	119	66	- 26	162	70	29

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 17.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1976.

	Hawai	Main ian Island	(A)		orthwester Ian island		Hawa I i a	Total n Islands	(A + B)		
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 mi.	200 mi.	100 ml.	50 ml		
 -				Month1y	nominal e	ffort ¹					
January	14	. 6	4	400	167	66	414	173	70		
February	119	78	44	427	213	81	546	291	125		
March	67	30	14	225	1 26	50	292	156	64		
April	91	35	16	18	5	2	99	40	10		
May	159	59	27	•	•	0	163	59	27		
June	203	75	33	7	3	. 1	210	78	34		
July	. ▼	3	. 1	1	•	•	8	3	ŧ		
Augus t		•	•	3	1	•	•	1	•		
September	23	11	5	139	78	32	168	89	37		
October	.60	29	14	191	94	36	251	123	50		
November	17	11	5	108	49	18	125	60	23		
December	62	39	22	343	160	64	405	199	86		
Total	623	376	185	1 856	896	350	2679	1272	535		
	Annual catch ²										
Albacore	95	55	31	912	357	140	1007	412	171		
Yellowfin	227	124	68	330	180	70	557	304	138		
tuna Bigeye	673	279	132	1155	563	221	1 828	842	353		
tuna Bluefin	0	0	0	1	•	•	. 1	•	•		
tuna Skipjack tuna	1	•	•	1	. 1	•	2	ì	•		
Total tunes	996	458	231	2399	1101	431	3395	1559	662		
				A	nnual catc	h²					
Blue	23	10	5	22	12	5	45	55	10		
marlin Striped	32	16	8	136	. 73	29	168	89	37		
marlin Swordfish	47	18	8	220	109	44	267	127	52		
Black		1	•	1	•	•	2	t	•		
merlin Spearfish \$ sallfish	. 7	3	2	8	•	2	15	7	•		
Total billfishes	110	48	23	387	198	80	497	246	103		

¹Effort in vessel days, * = < 1 vessel day.
²Catch in metric tons, * = < 1 mt.

Table 18.--Estimated catch and effort by Japanese longliners within 200, 100, and 50 miles of the Hawaiian Islands, 1977.

	Hawa I	Main Ian Island	Is (A)		Northwester Ian Island		Hawalla	Total n Islands	(A + B)		
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml		
				Month1	y nominalie	ffort ¹					
January	100	58	32	406	209	80	506	267	112		
February	159	100	58	113	53	18	272	153	76		
March	20	1.3	8	33	18	1 7	53	31	.15		
April	14	5	2	. 0	0	σ	714	5	2		
May	104	36	15	6	•	0	-110	36	15		
June	141	48	20	21	5	: 2	162	53	22		
July	21	9	. 4	43	25	9	64	34	13		
August	74	26	11	3	1		77	27	11		
September	85	29	12	50	24	9	135	53	21		
October	62	22	10	28	5	2	90	27	12		
November	19	6	3 .	90	33	12	109	39	15		
December	43	.19	8	664	312	114	707	331	122		
Total	842	371	183	1457	685	253	2299	1056	436		
	Annual catch ²										
Albacore	47	20	1 t	446	162	61	493	182	72		
Yellowfin tuna	206	120	68	304	156	57	510	276	125		
8 i geye	806	317	147	1510	709	262	2316	1026	409		
tuna Bluefin	. 0	0	0	1	•		1	•	•		
tuna Skipjack tuna	1 .	•	; •	. 1	•	•	2	•	•		
Total tunas	1060	457	226	2262	1027	380	3322	1484	606		
				A	nnual catch	2	······································				
Blue marlin	37	15	7	26	13	. 5	63	28	12		
Striped marlin	31	15	8	113	61	23	144	76	31		
Swordfish	25	. 9	· · · · · •	57	27	111	82	36	15		
Black	1	ť	7 · •	. 2	1	•	3	Ż	•		
marlin Spearfish & sailfi s h		3		5	2		13	5	2		
Total billfishes	102	43	20	203	104	40	305	. 147	60		

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 19.—Estimated catch and effort by longliners of Taiwan within 200, 100, and 50 miles of the Hawaiian Islands, 1972.

	Hawa 1	Main Ian Island	ls (Å)	Hawa	Northwester Tian Island	n is (8)	Hawa I I	Total an Islands	(A + B)
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 m1.	200 ml	. 100 mt.	50 ml
	-			Month1	y nominate	offort ¹			
January	0	0	0	0	• . •	0	0	0	0
ebruary	0	0	0	0	0	0	0	. 0	. •
Ierch	0	0	0	0	0	•	0	0	Ó
lpri i	o	•	o O	0	0	0	0	Ö	0
lay	. 0	0	Ó	0	0		0	•	. 0
lune	0	0	0	33	16	6	33	16	6
July	0	0	0	20	7.	3	20	7	. 3
August	o .	0	. 0	o	0	0	0	•	ó.
September	0	0	0	0	0	0 .	0	• 0	ó
October	Ó	0	,· 0	0	0	• •	0	0	•
November	0	o	0	0	ø	0	0	. 0	0
December	•	• •	0	0	. 0	0	. 0	0 *	
lotal .	0	0	0	53	23	9	53	23	9
					Annual cato	:h²			•
Albacore	0	0	. 0	99	.39	14	99	39	14
Yellowfin	0	0	0	17	7.	3	17	· •	3
tuna		, 0	. 0	3	1		3	1	•
Bigeye tuna	. 0	0	. 0	. Ö	- 0	0	0	0	. 0
Bluefin tuna		0	. 0	0	0	0	. 0	0	. 0
Skipjack tuna	0		•				· ·	•	. •
Total tunes	0	0	0	119	47	17	119	. 47	17
				•	Annual cat	ch ²			
Blue	0 '	0	0	0	• 0	0	0	. •	0
merlin Striped	•	0	0	3	1	•	, 3	1	•
mariin Swordfish	. 0	0	0	0	0	0	0	0	0
Black	. 0		•	•	0	0	. 0	0	0
marlin Spearfish & sallfish	. 0	0	0	. 0	0	0	0	0	, 0
Total billfishes	0	0	. 0	3	1		3	L	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 20.--Estimated catch and effort by longliners of Taiwan within 200, 100, and 50 miles of the Hawaiian Islands, 1977.

	Hawa 1	Main ian island	is (A)	Hawa	Northweste lian Islan	rn ds (B)	Hawa 1	Total Ian Islands	(Å + B)
	200 ml.	100 m1.	50 ml.	200 ml.	100 mt.	50 ml.	200 ml	. 100 ml.	50 mf
				Month	y nominal	effort ¹		ž	
January	5	2	1	47:	19	7	52	21	. 8
February	4	2	1	4	•	0	8.	2	1
Herch	1	•	*	0	o	0	. 1	•	•
April	0	0	0	o	0	O	0	0.	0
May	o	o ·	0	ø	0	ø	0	ø	
June	0	0	o	o	0	0	0	0	•
July	0	0	• •	o	0	ó	0	0	0
August	o - ,	0	0 .	0	0	0	0	o	0
September	G	0	o [°]	0	0	. 0	0	0	0
October	o ,	0 .	0	0	0	. 0	0	0	0
November	0	0	0	0	0	o	. 0	0	•
December	0	0	0	0	0	0	0	0	0
Total	10	4	2	51	19	7	61	23	
•				Ar	nual catc	h ²			
Albacore	7	1	1	34	7	2	41	8	3
Yellowfin	2	1,	1	4	2	1	6	. 3	2
tuna Bigeye	1	1		•	2	1	5	3	1
tuna Bluefin	0	0	o	Ó	0	0	0	0	•
tune Skipjeck tune	0 2	0	0	•	*	0 .	•		0
Total tunes	10	3	ś	42	11	4	52	14	6
				An	nual catcl	,2	·····		
Blue	•	0	0	1	•	•	1	*	•
merlin Striped	•	0	0	1	•	•	. 1	•	•
merlin Swordfish	•	0	o	•	0	0	•	•	0
Black	o	•	0	ó	0		0	0	o.
marlin Spearfish & sallfish	0	0	0	0	² 0	0	0	•	0
Total billfishes	•	0	0	2	*	*	2	•	•

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 21.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1965.

	Guam	(A)	Nort Marian		Areas combined (A + B)	
,	Within 50 mi.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 ml.	Within FCZ
		Mo	nthly nom	inal effo	rt ¹	· .
January	ż	iś	19	155	. 21	168
February	3	17	1 1	87	14	104
March	5	32	17	122	22	154
April .	1	4	3	27	• 4	31
May	•	į	. 6	49	6	50
June	1	4	6	41	7	45
July	1	8	t	5	2	13
August	1	7	i	4	2	1 1
September	. 1	9	•	1	. 1	. 10
October	.17	103	ŧ o	37	27	140
November	. 4	27	4	20	8	47
December	а	50	10	55	18	105
Total	44	275	89	603	132	878
			Annual	catch ²		
Albacore	8	48	8	55	16	103
Yellowfin tuna	26	160	20	95	46	255
Bigeye tuna	6	41	15	96	21	137
Bluefin tuna	•	• "	*	2	*	2
Skipjack tuna	*	•	. •	*	•	•
Total tunas	40	249	43	248	83	497
, , ,			Annua	catch ²		
Blue	6	36	8	40	14	76
marlin Striped	*	1	4	36	4	37
marlin Swordfish	*	1	3	24	3	25
Black	. *	1:		1	•	2
marlin Spearfish & sallfish	*	2	1.	7	1	9
Total billfishes	6	41	16	108	22	149

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 22.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1966.

	Guam	(A)	Nort Marian		Are combined				
	Within 50 ml.	Within FCZ	Within 50 mi.	Within FCZ	Within 50 mi.	Within FCZ			
	Monthly nominal effort ¹								
January	ì	6	4	33	5	39			
February	•	2	4	30	4	32			
March	3	22	5	17	8	39			
April	6	36	6	37	12	73			
May	3	22	. 6	43	9	65			
June	o	1	4	42	4	43			
July	, •	3	3	18	3	21			
Augus t	. 3	18	5	24	8	42			
September	4	26	5	. 25	9	5 1			
October	9	55	5	19	14	74			
November	3	20	1	5	4	, 25			
December	2	15	3	16	5	31			
Total	34	226	51	309	65	535			
•		,	Annual	catch ²					
Albacore	3	17	4	28	7	45			
Yellowfin	20	126	19	106	39	232			
tuna Bigeye	5	31	6	34	11	65			
tuna Bluefin	*	*	. •	1	*	1			
tuna Skipjack tuna	*		•	•	*	•			
Total tunes	28	174	29	169	57	343			
		. •	Annua	catch ²					
Blue	4	29	6	39	10	68			
mariin Striped	*	. •	1	9	t	9			
marlin Swordfish	•	•	2	19	2	19			
Black	*	1	*		•	2			
merlin Spearfish & sailfish		3	1	5	1	e			
Total billfishes	4	33	10	73	14	106			

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 23.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1967.

	Guam	(A)	Nort Marian		Ard combined	(A + B)			
	Within 50 ml.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 ml.	Vi thin FCZ			
	Monthly nominal effort ¹								
January	2	15	1 1	86	13	101			
February	7	44	t 3	60	20	124			
March	3	19	5	31		50			
April	4 .	26	10	46	14	72			
Hay	5	28	7	42	12	70			
June	•	3	. 8	65	8	6.6			
July	•	3	1	•	1	• 7			
Augus t	1	7	2	9	3	16			
September	•	. 2	•	. 1	•	. 3			
October	• ,	3	• •	•	•	3			
November	0	0	•	8	•	. 2			
December	3	16	12	102	15	118			
Total	25	166	69	468	94	634			
· .			Annual	catch ²					
Albacore	•	3.	9	79	9	82			
Yel lowf In	. 7	42	9	47	16	89			
tuna Bigeye	7	44	13	81	20	125			
tuna Bluefin	0	•	•	•	•	•			
tuna Skipjack tuna	•	•	•.	•	•	•			
Total tunes	14	89	31	207	45	296			
	•		Annua	catch ²					
Blue marlin	3	17	5	27	8	44			
Striped	•	1	2	17	. 2	18			
merlin Swordfish	•	1	•	26	•	27			
Black	•	· 1	•	· 1	•	2			
merlin Speerfish & selifish	•	2	1	5	1	7			
Total billfishes	3	22	12	76	15	98			

¹Effort in vessel days, * = < 1 vessel day.
²Catch in metric tons, * = < 1 mt.

Table 24.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1968.

***	Guam	(A)	Nort Marian	hern as (B)	Areas combined (A + 8)	
	Within 50 ml.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 mi.	Within FCZ
1	s .,s	Mo	onthly nor	inal effo	rt ¹	
January	*	3	8	64	8	67
February	, 6	37	. 11	66	17	103
March	12	74	14	84	26	158
April	3	20	9	67	12	87
May	2	15	3	14	5	26
June	2	- 14	4	33	6	47
July	t	10	6	51	7	61
August	2	15	1	4	3	19
September	2	10	t	. 6	3 -	. 16
October	*	3	, 1	3	1	6
November	1,	6	, t	t o	2	16
December	2	10.	. 10	83	12	93
Total	33	214	69	485	102	699
			Annual	catch ²		
Albacore	2	12	10	95	12	107
Yellowfin	. 17	104	11	52	28	. 156
tuna Bigeye	8	. 48	9	52	17	100
tuna Bluefin	*	*	•	*	•	•
tuna Skipjack tuna	. •	1	*		•	. 1
Total tunas	27	165	30	199	5,7	364
	1.44	re a	Annual	catch ²		
Blue	3	. 20	, 4	25	7	4 5
marlin Striped	, *	1	2	16	2	17
marlin Swordfish		1	4	. 32	4	33
Black	*	1	*	•	*	1
merlin Spearfish & sailfish	•	. 3	. 1	, 3	1	6
						

¹Effort in vessel days, * = < 1 vessel day.
²Catch in metric tons, * = < 1 mt.

Table 25.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1969.

	Guam	(A)	Nort Marian		Ard combined	eas I (A + B			
	Within 50 ml.	Within FCZ	Within 50 mi.	Vi thin FCZ	Within 50 mi.	Vi thir FCZ			
	Monthly nominal effort ¹								
January	1	. 6	5.5	165	23	171			
February	5	31	11	56	16	87			
March	5	32	7	39	12	71			
April		5	•	32	5	37			
Hay	• ,	. 2	1	7	1	9			
June	0	0	2	16	2	16			
July		6	1	11.	2.	17			
Augus t	* •	. 5	,3	21	3	23			
September	0	0	σ -	0	•	0			
October	1	5	3	1.1	•	1 6			
November	. 1	· · · •	.3	21	•	. 21			
December	•	24	6	33	10	57			
Total	19	119	63	412	82	53 1			
•	*.		Annua 1	catch ²					
Albacore	2	10	9	79	·	89			
Yellowfin tuna	6	42	14	71	20	113			
Bigeye tuna	5	34	14	72	19	106			
Bluefin tuna	0	. 0	•	•	•				
Skipjack tuna	*	*		•	•	•			
Total tunas	. 13	86	37	222	50	306			
			Annua	catch ²					
Blue	. 1	7	3	17	•	24			
marlin Striped	*	1	2	13	s	. 14			
marlin Swordfish	• .	$\mathbf{i} = \mathbf{i}$	2	17	2	16			
Black	*	. 1	•	1	•	. 2			
marlin Spearfish 6 sailfish	•	*		1	•				
Total billfishes	1	10	7	. 49	8	5 9			

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 26.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1970.

	Guam	(A)	Nort Marian		Are combined	as (A + B)
	Within 50 ml.	Within FCZ	Within 50 mi.	Vi thin FCZ	Within 50 mi.	Within FCZ
		Мо	nthly nom	inal effo	rt ¹	
January	4	24		54	12	7.6
February	4	24	22	167	26	191
March	2	15	42	226	44	241
April 1	1	7	8	64	9	71
May	3	16	7	, 66	t Ó	82
June	1	7	7	66	8	73
July	. 1	3	, t	5	2	8
August		, 7	, 5	27	6	34
September	2	12	4	. 23	6 , ,	35
October	2	13	8	45	10	5.8
November	1	4	9	. 39	10	43
December	. 0	1	. 25	. 68	25	89
Tótal	52	133	146	870	168	E001
. •			Annual	catch ²		
Albacore	1	7	17	92	. 18	99
Yel lowf In tuna	10	68	. 44	220	54	2P 8
Bigeye	•	26	14	85	18	11.1
tuna Bluefin tuna	0	0	. 0	0	0	0
Skipjack tuna		. • .	. 1	4	1	.4
Total tunas	15	101	76	401	91	502
			Annua I	catch ²		
Blue	2	13	11	63	13	76
marlin Striped	*	1	9	71	9	72
marlin Swordfish		1	5	37	5	38
Black	•	*		3		3
merlin Spearfish 6 sailfísh	•	1	3	16	3	17
Total billfishes	2	16.	28	190	30	206

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 27.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1971.

	Guam	(A)	Nort Marlan		Ar combined	eas (A + B)
	Within 50 mi.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 ml.	Within FCZ
		Мо	nthly nom	inal effo	rt ¹	,
January	0	ŧ	2	17	. \$	18
February	9	1	13	123	13	124
March	o	o	18	176	18	176
April	•	. 0	-4	59	,	59
May	0	0	•	5	•	5
June	,0	0	, t	21	1	21
July	. 0	0	2	. 12	2	1 2
August	0	0	1	19	1	19
September	o	0	47	72	47	72
October	. 9	0	113	136	113	136
November	13	17	54	99	67	116
December	0	0	64	282	64	282
Total	13	19	319	1021	332	1040
•			Annua	catch ²		٠.
Albacore	0	•	71	178	71	176
Yellowfin	6	8	95	216	101	224
tuna Bigeye	t	ı	20	97	21	98
tuna Bluefin	0	0	•	•	•	. •
tuna Skipjack tuna	•	•	•		•	
Total tunas	7	9	186	491	193	50 0
-			Annua	catch ²		
Blue	2	5	20	54	22	56
marlin Striped	•	*	6	48	6	4.8
marlin Swordfish	•	•	•	28	4	, 28
Black	0	. 0	2	. 5	2	- 5
marlin Spearfish & sailfish	o	0	2	17	. 2	17
Total billfishes	2	2	34	152	36	154

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 28.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1972.

	Guam (Å)		Northern Marianas (B)		Areas combined (A + B)					
	Within 50 ml.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 mi.	Within FCZ				
		Monthly nominal effort								
January	o	0	59	151	59	151				
February	•	1 .	23	. 65	23	66				
March	0	1	•	37	•	38				
Apr11	0	•	5	42	5	42				
May	0	15	2	14	2	29				
June	0	2	16	37	16	39				
July	. 0	. 0	2	12	2	12				
August	0	• 0	25	29	. 25	29				
September	• 0	t	30	39	30	40				
October	0	0	25	54	25	54				
November	O	0	19	44	19	4.4				
December	0	0	30	69	30	69				
Total	'0.	20	240	593	240	613				
	Annual catch ²									
Albacora	0		82	168	82	16.5				
Yellowfin tuna	0	5	70	111	70	116				
Bigeye tuna	0	6	14	48 .	14	54				
Bluefin tune	0	0	0.	0	, o	o ·				
Skipjack tuna	o .	0	. 1	1		1				
Total tunes	0	11	167	328	167	339				
		•	Annual	catch ²		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Blue marlin	0	2	. 8	22	8	24				
Striped		•	3	20	. 3	20				
merlin Swordfish	. 0	•	4	20	4	20				
Black	•	0		2	1	. 2				
merlih Spearfish & salifish	0	•	5	9	5	• , . •				
Total billfishes	0	2	21	73	21	75				

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 29.—Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1973.

	Guam	(A)	Nort Marian	hern es (B)	Are combined			
	Within 50 mi.	Within FCZ	Within 50 ml.	Wi thin FCZ	Within 50 mi.	Within FCZ		
	Honthly nominal effort ¹							
January	0	•	16	23	16	23		
February	0	8	3	26	3	34		
Herch	•	5	•	46	•	51		
April	*	9	1	5	1	14		
Hay	0	3	•	2	•	5		
June	•	10	3	16	7	26		
July	. •	12	•	2	*	14		
Augus t	• •	0	1	11	. 1	1 1		
September	o	•	. 1	6	1	. 6		
October .	•	3	0	1	•	4		
November	0	5	8	34	В	39		
December	o ,	0	6	61	6	61		
Tótál	4	55	43	233	47	288		
			Annual	catch ²				
Albecore	1	5	\$5	100	23	105		
Yel lowf in tune	, t	22	3	21	•	43		
Bigeye tuna	1 '	17	3	24	. •	41		
Bluefin tuna	0	0	0	0	, 0	0		
Skipjack tuna	0 .	. 0	•	•		•		
Total tunas	3	44	28	145	31	189		
			Annua	catch ²				
Blue merlin	•	7	,1	7	1	.14		
Striped marlin	•	1	1	11	. 1	12		
Swordfish	•	1	1	9	1	10		
Slack	•	•	•	•	•	•		
marlin Spearfish & sailfish	•	•	•	•	•	•		
Total billfishes	*	9	- 3	27	3	36		

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 30.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1974.

	Guam	(A)	Nort Marlan	hern as (b)	Are combined	(A + B)
****	Within 50 ml.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 ml.	Vithin FCZ
		Мо	nthly nom	inal effor	rt1	
January	. •	4		5	.	9
February	0	23	5	51	5	74
March	.,7	97	6	62	13	159
April	11	21	18	103	29	124
May	•	44	7	59	7	103
June	0	13	2	. 31	2	44
July	0	6	o	0	. 0	6
August	. 0	Ö	•	1	•	1
September	*	23	0	0	*	23
October	. 0	42	0	7	0	49
November	0	o	. 0	15	0	15
December	0	•	•	. 3		3
Total	18	273	39	337	57	610
			Annua 1	catch ²		
Albacore	1	70	. 1	20	2	. 90
Yellowfin tuna	13	111	4	28	17	139
Bigeye tunë	6	53	5	23	11	76
Bluefin	0	0			•	
tuna Skipjack tuna	0	•	. •	*	*	•
Total tunas	20	234	10	71	30	305
		•	Annua 1	catch ²		
Blue	, 1 .	27	. 5	19	3	4.6
mariin Striped	*	3	6	63	, 6	66
marlin Swordfish	•	2	4	29	•	31
Black	0	•		•	*	
merlin Spearfish & sallfish	*	4		. 2	•	6
Total billfishes	1	36	12	113	13	149

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 31.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1975.

	Guam	(A)	Norti Marlan	hern as (B)	Areas combined (A + B)	
•	Within 50 mi.	Within FCZ	Within 50 mi.	Wi thin FCZ	Within 50 ml.	Vithin FCZ
M. W		Мо	nthly nom	inal effo	rţi	
January	0	23	5	42	5	65
February	0	17	7	61	7	78
March	2	25	12	. 99	14	124
April .	6	27	17.	36	23	63
Hay	0	. 0	2	21	2	21
June	0	0	•	1	•	
July	. 5	20		. •	. 3	24
August	•	,2	3	3	3	5
September	•	23	5	6	5	29
October .	10	133	3	41	13	174
November	0	2	. 2	16	2	18
December	• , 0	6	. 1	12	. 1	1.0
Total	20	278	58	342	78	62 0
			Annual	catch ²		
Albacore	- 5	58	14	90	19	148
Yellowfin tuna	7	100	7	48	14	148
Bigeye tuna	2 -	. 44	3	30	5	, 74
Bluefin	0	•	•	1	•	i
tuna Skipjack tuna	•.	•	•	•	•	. •
Total tunas	14	202	24	169	36	37 1
			Annua	l catch ²		
Stue martin	3	36	3	14	6	50
Striped mariin	•	•	3	21	3	2 1
Swordfish	•	t	, 5	36	5	37
Black	. 0	•.	•	•	•	. 4
merlin Spearfish 6 salifish	0	•	•	1	•	. 1
Total billfishes	3	37	11	72	, 14	.109

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 32.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1976.

	Guam	(A)	Nort Marian	hern as (B)	Are combined				
•	Within 50 mi.	Within FCZ	Within 50 mi.	Within FCZ	Within 50 mi.	Within FCZ			
	Monthly nominal effort ¹								
January	10	60	13	88	23	148			
February	6	36	. 9	57	15.	93			
March	2	13	6	. 44	8	57			
April	5	30	, 5	21	t o	51			
May	1	7	1	5	2	12			
June	1	7	1	7	2	14			
July	6	39	3	13	9	52			
August	5	30	5	27	10	5.7			
September	5	30	•	. 25	9	55			
October	. 11	65	5	37	16	102			
November	31	192	18	127	49	319			
December	37	226	13	49	50	- 275			
Total	120	735	83	500	203	1235			
			Annua 1	catch ²					
Albacore	14	90	13	91	27	181			
Yellowfin tuna	93	577	44	190	137	767			
Bigeye tuna	41	252	21	95	62	347			
Bluefin tuna	0	*	•	*	•	•			
Skipjack tuna	•	3	* •	1	•	4			
Total tunas	148	922	78	377	226	1299			
			Annua 1	catch ²					
Blue marlin	9	58	6	32	15	90			
Striped marlin	*	2	. 1	8	1 ,	10			
Swordfish	2	10	3	20	5	30			
Black	•	1.	•	. 1	*	2.			
merlin Spearfish & sailfish	•	2	*	. 2	*	4			
Total billfishes	11	73	10	63	21	136			

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 33.--Estimated catch and effort by Japanese longliners around Guam and the Northern Mariana Islands, 1977.

	Guam	(A)	Nort Marian	hern as (B)	Are combined	(A +.B)
	Within 50 ml.	Within FCZ	Within 50 mi.	Within FCZ	Within 50 ml.	Within FCZ
		Мо	nthly non	inal effo	rt¹	
January	17	106	14	77	31	183
February	5	34	8	48	1.3	62
Merch	11	69	12	70.	23	139
April	8	48	- 5	20	13	6.8
May	29	163	20	83	49	26.6
June	26	168	.34	137	60	30 5
July	20	130	25	108	45	238
August	8	52	10	45	18	97
September	13	80	15	64	28	144
October .	22	136	17.	74	39	210
November	24	152	21	94	45	246
December	7	41	9	57	. 16	96
Tótal	190	1199	190	877	380	2076
			Annua 1	catch ²		
Albecore	. 7	49-	12	109	19	158
Yel lowf In tune	217	1 368	208	861	425	2229
Bigeye	90	572	94	406	184	978
Bluefin tuna	•		•	1	, •	1
Skipjack tuna	• ,	•	•	•	•	•
Total tunes	314	1989	314	1377	628	3366
		• ,	Annua I	catch ²		,
Blue meriin	14	87	15	63	29	150
Striped marlin	•	t	•	2	•	. 3
Swordfish	1	9	2	13	3	22
Black	1	5	1	. •	2	9
merlin Spearfish & sailfish	•	2	•	1	. •	3
Total bilifishes	16	104	18	83	34	187

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 34.--Estimated catch and effort by longliners of Taiwan around Guam and the Northern Mariana Islands, 1967.

	Guam	(A)	Nort Marian	hern as (B)	Ard combined	eas (A + B
	Within 50 ml.	Within FCZ	Within 50 mi.	Within FCZ	Within 50 ml.	Within FCZ
		Мо	nthly nom	inal effo	rt ¹	
January	0	o	0	0	0	0
February	0	o	o	o	o	0
March	0	Ó	0	0	O	0
April	0	. 0	. 0	o	0	
May	0	0	o	0	0	0
June	. 0	0	0	0	• 0	. 0
July	2	12	2	10	4	22
August	. 0		• 0	0	0	0
September	o	o	0	· o	0	0
October	o	0	0	0	0	. ·
November	0	o	0	0	0	
December	0	0	. 0	o	. 0	o
Total	2	12	2	10	4	22
•			Annua	l catch ²		
Albacore	0	0	0	0	. О	ď
Yellowfin	•	2	•	2	*	. 4
tuna Bigeye	*	1	•	. 1	•	2
tuna Bluefin	. 0	0.	0	0	0	0
tuna Skipjack tuna	0	0	0	0	0	C
Total tunas	*	3		3	*	6
•		•	Annua	i catch²		
Blue	*	1	*	1	•	2
marlin Striped	*	*	• .	•	*	•
marlin Swordfish	0	0	0	o	. 0	·
Black	*		•	* *	• ,	
marlin Spearfish & sallfish	*	•	*	•	•	
Total billfishes		1	. *	1		- 2

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 35.--Estimated catch and effort by foreign longliners based at American Samoa, 1965.

		Inside FCZ	FCZ (A)			Outside FCZ (8)	(S)			だいしょう ゆいいゆ のしいしに	(a+4) (.	-		#1 CH 111 20 mil.	
· · · · ·	Japan	Taiwan	Korea	Total	Japan	Talwan	Koras	Torot	Capan	Taiwan	Korea	Total	Japan	Taiwan	Korea	Total
1							Month	Monthly nominal effort	effort	-						
	ç	į		10	7.74	9	275	1301	987	1 90	317	1394	SO.	•	-	•
January) C	, «	; -	2 5	702	158	329	1189	714	1 60	330	1204	•	•	0	0
February	• •	: 2	'n	212	584	1117	355	1056	290	129	358	1017	0	o ((- «
March April	0	.	0	*	802	272	379	1453	802	272	379	1453	0 (0 (o •	> -
1	0	m	m	•	194	216	337	1020	467	519	0 M	1026	0 6	٠.	- 'h	• «
11100	0	N	12	*:	654	218	327	1199	654	220	onn I	1213			. 17	m
) ·	0	n	v	60	215	691	338	1019	215	172	n	1021	5 6	.	n r) v
August	•	12	•	1.8	625	137	331	1093	625	641	337	·	5 6	n -	n «	۸ د
September	-	•	21	58	588	123	371	1082	589	130	392	1111			,	•
October	10	5	60	37	569	187	418	1174	574	211	\$ 5 *	1171	.	or or	. 4	22
November	- C	; ;	4 4	† 1 1 † 6 1	193	142	260 244 343	1583	1087	181	800	1777	•	56	. 1	;
December	;		}												6.3	1.00
Total	1+8	185	216	549	8164	2037	4163	14364	8312	2222	4379	14913	•	٥	2	75.1
							¥	Annual catch ²	h ²							
,											•	948	•	Ç.	45	. 48
Albacore	124	143	171	438	9289	Ø:0:0 1	4173	15021	5146	1762	****	Ac+c ↑	•	3	!	· ·
Yellowfin	23	27	0	. 6 0	\$692	761	1604	5059	2715	7.88	1544	5147	N	w.	=	2
tuna	'n	81	58	46	8 + + 1	423	1485	3356	1453	€ 138	1121	3402	•	2	v	•
tuna		•	•	•	•	r	۳	. 4	PF	PT	m	0	0	٠	0	•
Bluefin	0	•	•	.	.	1	,	•	,)	ı	;		. •	.•	٠.*
Skipjack	•	•	*	• .	1.7	m	•	53	17	m	Φ	58	•	•	•	. ;
tuns			-													
Total tunes	180	185	237	572	13451	2749	7274	23474	13601	2934	751:	24046	6	37	58	103
	,			,			∢.	Annual catch ²	h²							
9100		ın	•	'n	35	36	125	961	36	7	132	509	•	N.		n
marlin	•	•	•	. 14	er e	m	8	72	E	. M	Ġ.	25	•	*	•	*
Striped earlin				, ·,		. *	2	-	1	•	. (ž			*	•
Swordfish	•	•	'n	m	sn	P)	25	B	۰n .	7	87	ŝ	•	,	í	
Black	•	m	un.	100	8	36	ĭĒ	69	N	66	36	11	0	*	•	•
marlin	•	. •	*	*		M	11			m	11	21	•	*	•	•
spearrish 6 sailfish					:		:				-					
Total billfishes	-	80	81	27	62	91	248	166	63	82	266	418	•	2	-	"
				ŀ			*	Annual catch ²	.h²							
	ď	-	**	0.7	61	9	99	266	8	17	9	276	•		•	
Manage	•	•		,												

lEffort in vessel days, * = < l vessel day.
left.

Table 36. -- Estimated catch and effort by foreign longliners based at American Samoa, 1966.

		inside FCZ (A)	FCZ (A)			Outside FCZ (8)	(8) ZO:			Entire area (A+B)	8 (A+8)			Vithin	Within 50 mi.	
	Japan	Talvan	Kores	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total.	Japan	Talwan	Korea	Total
							Monthly	/ nominal effort	sffort1		ŀ					
	;	. }		. (,		. ;				9	1130	a	ť	•	1.1
September 2	0 :	S ·	7	6	9 K	202	\$	1366	0 d	377	464	1390	'n	0	n. ∲	
March		37	23	78	473	964	495	1466	164	535	518	1544	٥	~	•	11
April	-	'n	٥	12	266	248	405	1219	267	553	111	1231	0	•	*	
Kay	•	91	n	61	401	713	818	1932	104	729	128	1661	* ,	N	0	~
June	0	\$	•	*	572	554	116	2037	572	888	116	2082	•	-	0	 ;
ylut	-	23	==	89	843	662	908	1162	844	715	817	2376	0	-1	0	~ ;
August	0	35	N	37	888	651	728	2267	888	989	130	2304	0	4	0	* :
September	^	. 21		58	969	64 4	667	2010	703	668	668	2039	rŋ (h 1	0 (2 !
October	ń	6	56	128	161	862	878	2531	794	196	† 06	2659	o .	lD v	10 P	2:
November	27	165	37	553	599	725	7 2	2285	626 826	06.0	866	2530	0	o 60	- N	12
December	•	134	01	148	225	1201	939	2382	350	1133		25.53	,	,	•	
Total	92	650	159	106	7257	7460	8331	23048	7349	8110	8490	23949	56	19	26	113
							۲	Annual catch ²	2,					s.		·.
Albacora	6	A24		. 688		7047	2 100	24907	0000	7472	2116	25489	11	* P	5	9
	9	Ç	2	.		})	!	:					
Yellowfin	61	88	25	132	2749	2343	2297	7389	2768	2431	2322	7521	~	~	•	0 1
tune	01	\$	9	8	1544	1011	2613	8915	1554	1065	2631	5250	m	•	***	60
tuna	•		•	. ,	,	4	.9		•				•		c	
Bluefin	•	-	* .	-	*	m	•	Ó	:	•	•	Š	•	•	•	• ;
Skipjack	*	7		**	80	91	53	65	50	17	53	99	•	•	•	₩.
tuna																
Total tunas	18	569	148	798	13175	10420	13960	37555	13256	1 09 89	14108	38353	21	45	20	98
							A	Annual catch ²	12	-						
1	•	•	•	7	•	•	. **	640	. 4	944	227	673	*	N		, m
oi (Jean	•	e e	1	;	,) }				!	!					
Striped	٠	m	М	•	*	† 01	73	177	•	101	76	183	•	*		,
Swordfish	*	ın	N		*	31	39	70	*	8	;	**	•			-
Black	*	N	N		*	9	92	152	•	62	*	951	٠		•	•
marlin		٠.	1							ì		• •		•	. 4	•
Spearfish & sailfish	•	-		~	•	n n	28	3	•	Ø m	62	6	•	•	•	
Total billfishes	•	6.	=	09	•	638	456	1094	٠	667	467	1154	٠	n	2	80
				٠			¥	Annual catch ²	4.2			-	•			
Wehoo	~	6	N	•	121	8	168	368	123	6	170	374		•	1	~
		•														

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

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Table 37.--Estimated catch and effort by foreign longliners based at American Samoa, 1967.

		inside	inside FCZ (A)			Outside FCZ (B)	.cz (8)			Entire area (A+B)	a (A+B)		* .	Vithir	Within 50 mi.	
1 , 7	Japan	Taiwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total
					•	a prophetic managed by the same	Monthly	nomina}	effort ¹		 X			7		
				• .						1	;	,	ć	•	•	•
January	•	35	-	36	395	702	8 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	1940	365	737	9 4 4	2112	• •	*	d	Ö
February		20	16	90	371	832	B (8)	1802	7 7 7	2 2	000	2410	•	•	•	1
March	•	35	•	30	53.8	838	000	1 1 1 1 1	900	20.8	M. O	2395		•	٠	•
April		o E	în -	9 (D (164	0 4	26.30	2 4	980	905	2647	o	8	N	•
May	Φ,	61	on (72	7 U	100	208	26.46	795	942	106	2644	0	'n	Ó	m
June	0	6 0 1	о.	.	130	* u	40	2666	727	856	80	2670	0	*		•
July	0 1	n (⁽ -	• •		0.00	1009	3038	980	1058	1013	3051	Ö	*	0	* •
August	,	· <u>-</u>	• =	7 0	726	96	775	2466	726	978	785	24.89	0	 (m R	0 0
September	,	3	· -	7	626	1241	922	2789	626	1281	923	2830	0 1	o 1	o (* *
November .	9 0	\$ 65	. ~	7.1	447	1014	916	2377	457	1073	916	2448	0 (•	.	- et
December	. 0	7		4.2	283	817	909	1706	283	68.89	607	1748	,			,
1	=	212	53	376	7197	11235	10617	29049	7208	11547	10670	29425	*	6*	o	53
10181	:								2							
							₹	Annual caren	E	í.						
Albacore		9	19	111	7469	69801	9680	28019	7477	61011	6696	28195	•	54	m	27
	,	•			1		. [1907	1001	94.46	2381	6104		•	m	•
Yellowfin		7	60	90	1292	2339	2373	0	1643	9	; }					
tune	•	21	m	25	1153	2002	3128	6373	11 \$3	24.13	3131	6397	o ·	4	*	•
tuna			••		. 1				٠	-		28	6	*	•	*
Bluefin	•	٠.	* :	*	5 0	1	~	9	o '	:	•	; *				
tuna	•				28	59	33	00	28	30	33	16	0	*	•	N.
tuna																
Total tunas	6	213	20	252	9950	1 5390	15223	40563	6566	15603	15253	40915	•	ř	۰	0.
							¥	Annual catch ²	h ²							•
								;	•	CE 4		8.0	•	m	. *	, m
Blue	*	to		6	-	412	101	• 000	•	?		}				
Striond	*	÷	•	*	~	134	35	190		134	ιċ	061	0	*	*	•
merlin	• •	,	•		*	3.7	9	, N	•	F	91	53		*	0	•
Swordt i sn	•	• .	,			i, ;	. !				, t	-	0	•	*	*
Black	*	~		m	*	89	54	c2 1	•	2	3		•			
Spearfish	0	7	•		•	0 •	₹,	06	•	9	7	6	•	•	•	
6 501(7150												2.3.		•	-	"
Total billfishes	*	12	~	23	2	700	320	1022	2	721	322	1042	•	,		,
				•			4	Annual catch ²	:h²					~		,
467	•			m	53	135	252	91	29	138	252	410	•	0	•	*
Marko	,	,														

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 38. -- Estimated catch and effort by foreign longliners based at American Samoa, 1968.

Table Tabl							֡						-				
Monthly medial effort: Monthly medial effo		Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Lapan	Talwan	Korea	Total
The control of the co								Month!		ffort							
1	valuet	•	9	c	ē	***	600	484	21.24		1043	888	2177	c	•		•
1	February		*	,	:	293	984	2 6	2023	294	1026	747	2067	•	N	•	N
1	March	•	84	•	57	396	1146	808	2347	396	1194	♦18	2404	0		Ö	~
1	April	•	\$	~	44	403	1058	885	2346	403	20 ::	887	2393	0	•	٥	v
Columbia	Hay	•	6 E		0	490	1531	946	2727	06*	1330	246	2767	•	7	-	ח
The control of the co	June	0	S.	m	36	10 80	1003	1132	2518	383	1036	1135	2554	0		-	•
The country of the co	July	•	n	Ņ	vo	159	1030	985	2374	159	1033	987	2379	0	0	•	•
Fig. 6 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	August	0	22	*	56	372	937	820	2129	372	956	824	512	0	24	?	•
Fig. 1 1 1 1 2 3 32 186 575 777 1818 186 574 770 1830 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	September	0	12	-	22	282	999	. 772	1620	282	587	773	1642	•	٠.	0	~
Fig. 2 5 340 68 433 3947 10428 10077 24452 3952 10768 10165 24685 1 477 Fig. 3 153 394 195 3153 7938 6438 17259 3156 8051 6477 17724 1 19 Fig. 2 56 115 319 195 3153 7938 6438 17259 3156 8051 6477 17724 1 19 Fig. 2 56 115 319 195 3153 7938 6438 17259 3156 8051 6477 17724 1 19 Fig. 2 56 115 319 195 3153 7938 6438 17259 3156 8051 6477 17724 1 19 Fig. 3 16 319 195 3153 7938 6438 17259 3156 8051 6477 17724 1 19 Fig. 4 15 3 16 319 1401 1474 3194 3194 3194 3194 319 1416 1477 3212 1 19 Fig. 5 226 56 289 4690 13033 11443 29166 6695 13259 11501 29455 1 25 Fig. 6 6 7 1 65 11 1597 130 1728 11 1651 131 1793 6 5 Fig. 7 12 12 12 12 12 12 12 12 12 12 12 12 12	October	•	<u>•</u>	m	32	186	575	757	1518	186	294	770	1550	0		*	
Annual Catch 3 340 88 433 3947 10428 1077 24452 3952 10768 10165 24685 11 47 Annual Catch 6 15 34 165 3153 7936 6438 17229 3156 8051 6477 17724 19 6 15 3 163 3947 10428 1077 24452 3952 10768 10165 24685 11 47 Annual Catch 7 Annual Catch 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	November	~	• ;	50	SE S	170	474	940	1484	172	478	989	6151	→ 1	0	5	52
1 153 194 194 194 194 194 194 195 194 195 194 195 194 194 195 194 195	December	-	•	23	38	165	37.1	104	1240	991	385	727	1279	0	•	2	•1
Annual catch ² 15. 15.3 39 195 315.3 7936 6438 17529 3156 6051 6477 17724 199 16. 15 39 195 3153 7936 6438 17529 3156 6051 6477 17724 199 16. 15 3 16 319 1401 1474 3194 3194 319 1416 1477 3212 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	fotal	so.	340	88	433			10077	24452	3952		10165	24685	-	2.0	38	96
Triangle Cartering Carteri																	
Fig. 2 59 153 39 195 3153 7936 6438 17529 3156 8051 6477 17724 * 19 1 15 1208 3567 3488 8353 1210 3725 3503 6436 * 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					٠.			ŧ	שמים כישנכים			٠.			•	: ,	
trins 2 58 15 75 1209 3667 3488 8363 1210 3725 3503 6438 6 5 5 6 6 7 1 1 1 5 1401 1474 3194 319 1416 1477 3212 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Albacore	m _:	153	39	195		7938	6438	17529	3156	1508	22.5	17724	•	61	50	8
tunas 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 8 25 tunas 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 8 25 tunas 6 289 4690 13033 11443 29166 4695 13259 11501 29455 8 25 in	/ellowfin	•	S.	<u>.</u>	, Y		1667	8645	LYLE	0161	37.24		A 1 4 A	. 4	•	•	2
tunes 5 226 56 289 4690 13033 11443 29166 4699 13259 1130 1 29455 8 25 tunes 5 226 56 289 4690 13033 11443 29166 4699 13259 11501 29455 8 25 tunes 5 226 56 289 4690 13033 11443 29166 4699 13259 11501 29455 8 25 lin	Eus.	1	3		?		}		3	•	;	,))	٠.	•		•
Euries 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 9 25 Euries 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 9 25 Funds 6 1 50 5 1026 45 1076 5 1075 46 1126 4 4 25 In	ligeye	•		m	91	616	1 40 1	1474	3194	319	91+1	1477	3212	• ,		-	~
tunas 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 • 25 tunas 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 • 25 lin	luefin	•	•		-	1 0	*	12	ī	•	=	13	32	0	*	. #	•
tunas 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 8 25 tunas 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 8 25 lin	tuna				•		-										
tunas 5 226 56 289 4690 13033 11443 29166 4695 13259 11501 29455 8 25 Annual catch ² In	iki pjack tuna	•	•	•	•	n	<u>r</u>	Ē	9	w	1	ñ	•	o.	•	•	•
tinas 5 226 36 289 4690 13033 11443 29166 4695 11350 20455 8 253 Annual catch ² Annual c		ļ													. :		ľ
Annual catch ² in * *9	otal tunas	s	226	28	289		1 3033	11443	29168	4695	13259	10511	29455	•	25	28	53
in								An	nual catch	7					5		
in to the state of	- ne	-4	•	-1	80	1 0	1026	\$	1076	'n	1075	9	1126	*	. 🝨	٠	. •
1	marlin			1			:				:						
ish *<	triped	•	 .	•		•	230	8	254	•	231	50	255	0	*	•	•
in	wordfish	•	∾.		N	-	5	01	86	-	\$	01	100	•	, •	•	•
1	lack	0	•	٠	•	٠	168	56	194	•	111	26	203	6	-	•	-
Sh	narlin														:		
billfishes	pearfish 6 sailfish	*	m	•	m	-	%	8	90	-	2	50	109	.	•	•	•
Annual catch ²	otal bilifishes	•	† 9	1	65	11	1587	130	1728	11	1651	131	1793	•	6	٠	8
e 5 e 5 6 80 147 233 6 89 147 238 e e								Ą	nuel catch	. 2							
	Wahoo	٠	•	•	10	•	90	147	233	•	80	147	238	•		•	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 39. -- Estimated catch and effort by foreign longliners based at American Samoa, 1969.

		Inside FCZ	FC2 (A)			Outside FCZ	FCZ (8)			Entire area	a (A+B)			Within 50	50 mi.	
	Japan	Taiwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Taiwan	Korea	Total
							Monthly	Monthly nominal e	effort ¹							
January		30	80	81	*	393	765	1222	9	423	815	1303	0	1 0	27	32
February	0	32		F 4	95	413	954	1462	95	445	965	1505	0	80	-	0
March	ò	28	12	0,	181	579	934	1694	181	607	946	1734	0	60	α¢	16
April	2	60	-	11	181	532	1012	1725	183	540	1013	1736	0	0	0	0
May	0	*	0	*	168	706	1064	1938	168	106	1064	1938	0	•	0	o ·
June	0	m	~	មា	224	940	1611	1961	224	549	1193	1966	0 (0 (# .6	4 (
July	•	•		~ :	233	645	1328	2206	233	159	1329	2213	0 (o +	5 (5 i
August	0 (m ;	۰:	m (223	669	1214	2136	223	702	1214	2139	0 (* -	5 (# P
September	0 0	4 (0 7	* 2 .	101	0 5	100	1007	101	7.00	* *	6202	5 (٠ ،	u 4	۸ ۲
Votes of Party of Par	,	267	0 4	9		901	1172	20.28	50	100	1000	2000	, 0	10) -	01
December	. 0	163	**	210	4	725	1305	2075	45	888	1352	22.85	0	0	m	12
Total	м	623	385	1011	1816	7487	13454	22757	1819	8110	13839	23758	0	45	4.7	68
								4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1								
							₹	שמפו כפננו	_							
Albacore		109	249	751	1570	6395	91001	17981	1571	9689	10265	18732	•	23	9	4
Yellowfin	-	103	95	189	746	2789	5636	9171	747	2882	5721	9360	· •		17	24
tuna Bigeye	*	†	15	69	£6	1467	.2117	3677	6	11211	2132	3736	o	*	8	v o ,
tuna Bluefin	0	-	٦,	n	•	6	11	₩ P	•	50	13	37	•	•		
tuna Skipjack	0	-4		N	٨	13	9	99		•	4.	89	0	•	•,	•
tuna							-									
Total tunas	2	650	352	1 304	2420	10683	17826	30929	2422	11333	18178	31933	0	39	36	75
							Ar	Annual catch ²	21							
s ne	٠	184	•	161	53	1461	39.8	1912	. 88	1645	405	2103	c	10	-	91
Striped	0	^	Φ	· ·	0	218	152	410	.*	225	191	4 2 6	0		~	~
marlin	c	-	4	v.	7.1	12	1 00	163		22	62	168	•	•	-4	••
	c	-	М	1.7	M	192	139	98	m	206	142	181	•	•	*	*
marlin	,		,	•)]	}	}			!					
Spearfish & sailfish	0	=	-	21	60	306	134	448	60	317	135	4 00	0	-	*	-
Total billfishes		217	24	241	121	2248	868	3267	121	2465	922	3508	0	16	•	50
							Ar	Annual catch ²	2,1							•
Vahoo	*	*	•	•	•	27	152	185	•	27	1 36	199	•	0	•	•

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 40.--Estimated catch and effort by foreign longliners based at American Samoa, 1970.

															,	
		Inside FCZ (A)	FCZ (A)			Outside FCZ (8)	CZ (8)		_	Entire area (A+8)	a (A+8)			Vithin 50 ml	50 ml.	
	Japan	Talwan	Korea	Total	Japan	Taiwan	Korea	Total	Japan	Talwan	Korea	Total	Laper	Talwan	Korea	Total
			-				Monthly	Monthly nominal effort	ffort		٠.					
January	0	80	- 1	•	82	1095	1103	2370	80		1204	2419	c	*	ŗ	•
February	0	23		*2	86	956	1280	2244	82	646	1281	2268	• •	0	9 0	
March	0	€0	01	8 7	1.12	1135	1216	2463	112	1143	1226	2481	0	0	0	0
April	•	103	;	**	127	1057	1043	2227	121	1160	1084	2371	0	ĸ	•	'n
May.	0	80	N	^	8	1123	1212	2434	66	1128	1214	2441	•	*	-	,
	0	Ø †	Ф :	57	131	1181	1012	2324	131	1229	1021	2381	•	٠	0	*
Ainc	0		N	o	124	1010	1083	2217	124	1017	1085	2226	0	*	0	*
August Sentember	0 (01	۰ ۰	<u> </u>	5	158	1121	2053	18	961	1121	2063	O		•	*
October	9 6	n o	- <u>r</u>	0 %	0 4	* 0	7 0	1735	80	619	892	1791	0 0	<u>n</u> :	•	<u>n</u> :
November	0	991	: 2	257	328	1281	1082	2395	32	1447	1173	2652	,	23	>	, 54.
December	0	104	170	334	32	953	1013	8661	32	1111	1183	2332		2	· Cţ	12
Total	c	679	353	1032	984	12476	13164	26604	984	13155	13497	27636		69	^	76
							Ą	Annual catch ²	2							
Albacore	o	433	173	909	952	10548	11770	23270	982	10601	11943	23876	0	£	^	e P
Yellowfin	0	138	4	163	260	1 424	4168	6998	263	4379	4213	8852		œ	-	0
Bigeye	6	16	10	19	٨	1859	1524	3390		1910	1534	3451	•	•	*	4
Bluefin	0	m	٠	m	٠	*2	:	98	*	22			o	•	*	
Skipjeck tune	•	~	N	•	•	52	108	172	*	66	110	176	•	• .	•	. • .
Total tunas	0	627	230	957	1226	16729	17584	35539	1226	17356	17814	36396	•	9	n	:
							¥	Annual catch ²	2							
Blue	۰	0	. 4	57	9	836	\$65	1516	.98	976	119	1573	0	n	•	m
Striped	•	•	ĸ	11	M	194	249	486	83	051	254	497	•		•	-
Swordfish	•		**	8	22	33	153	208	22	†	154	210	•	•	. •	
Black Geelle	•	ø	N	•	n	901	151	260	, m	112	153	. 588			*	
Spearfish 6 sailfish		Ņ	N	• .	2	- 28	260		80	2	262	995	•	•	•	* .
Total bilifishes	۰	58	27	82	182	1246	1407	2835	1 82	1301	1434	2917	•	8	•	6
		-		•			Anı	Annual catch ²								Ì
Wathoo	0	-	•	•	m	, 9	179	218	m	33	185	225	0	*	•	
													-			-

¹Effort in vessel days, * = < l vessel day.

²Catch in metric tons, * = < l mt.

Table 41.--Estimated catch and effort by foreign longliners based at American Samoa, 1971.

		Inside	inside FCZ (A)		,	Outside FCZ (B)	-CZ (B)			Entire area (A+8)	a (A+8)			Vithic	Within 50 mi.	
	Japan	Taiwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total
							Honthly	Monthly nominal	effort ¹						-	
	-	* :	6	F.46	20	40	101	2023		1059	1146	2266	*	51	15	0
	• 6		, M	0	=	E 40		2020	*	1022	1076	2112	•	13	v î	18
March	. 0	37	01	1.	56	1157	198	2064	52	1154	168	2111	0	01	*	01
April	0	17	-	18	11	1275	1901	2347	:	1252	1062	2365	•		0	-
1	0	33	*	20	25	1145	1475	2673	2	1178	1475	2706	0	•	•	•
June	0	91	-	61	92	1267	1518	2861	76	1285	1519	2880	0	v	*	1 0 (
July	0	50	-	21	89	1565	1578	3211	99	1585	1579	3232	•	m	•	P
August	0	-	•	¥0	4	1313	1514	2872	¥	1314	1518	2877	o	•	•	•
September	0	91		61	57	1095	1001	2213	57	1113	1062	2232	0	*	0	•
October	0	35	m	18	7.7	1226	1126	2429	1	1521	1129	2467	0		0	4 (
Movember	0	105	^	112	#M	1208	1418	2660	Ħ	1313	1425	2772	•	'n	0	n ;
December	•	611	m	122	•	1004	1392	2526	•	1213	1395	2648	•	2	#	77
Total	-	586	182	769	521	14283	1 5095	29899	\$22	14869	15277	30668	*	8	50	106
							₹	Annual catch ²								
Albacore	*	293	49	372	379	9660	11690	21729	379	5566	11.769	22101	•	37	•	\$
)				:	•									
Yellowfin	•	2	±	80	98	5270	4392	9748	8	5344	9044	9836	•	8	-	•
tuna	•	ç	. 6	•	-	1248		2366	9	1290	1090	2390	•	m	•	m
algeye	•	3	ų.	V	2			3	:	!				ı		
Bluefin	•	*	*	•	•	en en	15	Š,	•	ደ	57	S	•	•	•	*
tune							;		•	;	•		•	•	•	
Skipjack	•	•	•	•		2	8	8	V ,	3	3	1			•	•
250																
Total tunes	•	389	86	404	477	16257	17245	33979	***	16646	17340	34463	•	40	۰	57
							A	Annual catch ²	71							
	*	73	22	8	90	1148	1235	2478	8	1221	1257	2573	*	15		6
			;	?	•))									٠	
Striped	0	01	s n	2	m ·	426	828	1319	*	436	***	1334	0	-		N
Swordfish	0,	7	-	N	1.7	63	385	465	1.7	\$	386	467	•	•	*	*
Black	0	ņ	8	^	-	126	916	2	, 	121	919	650	•	m	•	m
merlin																
Spearfish 6 sailfish	•	•	m	n	n	5	1 029 .	1093	n	5	1032	9607		0	-	-
Total billfishes	•	66	R	122	150	1824	4024	5998	150	1913	4057	6120	*	62	•	25
									1							
				•			₹	Annual catch*	,							
Vahoo	0	ĸ	-	•	•	28	283	290	•	8	254	296	•	•	•	٠

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 42.--Estimated catch and effort by foreign longliners based at American Samoa, 1972.

			Inside	Inside FCZ (A)			Outside FCZ (8)	FCZ (8)			Entire area (A+B)	A (A+B)			Within 50	50 mi.	
Marchi M		Japan	Taiwan	Korea	Total	Japan	Taiwan	İ	Total	Japan	Taiwan	Korea	Total	Japan	Talwan	Korea	Total
The control of the co								Month	nominal	sffort ¹							
	January	•	80	-4	9	72	1200	1168	2440	72	1289	1169	2530	۰	<u> </u>	0	13
Color Colo	February	0	16	•	91	20	1281	1229	2530	20	1372	1229	2621	0	91	0	91
Column C	Harch	•	•	m	7 7	27	1655	1129	2811	27	1663	1132	2822	•	•	0	0
Column C	April	•	. 58	+	32	•	1723	1134	2857	0	1521	1138	5889	0	-	0	
The control of the co	May	0	52	•	25	0	1763	1448	3211	•	1788	1448	3236	•	*	•	*
17 1 2 2 2 2 2 2 2 2 2	June	0	27	0	2	0	1424	1466	2890	0	1436	1466	2902	0	•	0	*
Triangle Color	July	۰ ۵	12	(55	0 1	1374	1858	3232	0	1395	1859	3254	0	•	0	•
The control of the co	August	0 (0 :	Ν.	72	0	1229	1468	2692	0	1299	1470	5769	0	s)	0	មា.
Transition	September		<u>.</u>	•	4 1	0	1095	1070	2165	0	1 1 05	1074	2179	0		8	m
Triangle	Uctober	9 0	~	6 (٠;	0 (1601	946	1261	o (1038	946	1984	0 (- 1	0 ((
1	December	ò	* 2 *	N M	45	9 0	1221	11101	2398	9 0	1263	1180	2443	,	v •	> N	N 60
Annual catching 0 170 6 176 60 10083 9949 19992 60 10253 9855 20166 0 19 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						.				.					,		
	Total	0	445	20	462	611	15932	15274	31325	-	16374	15294	•	0	\$	•	6 \$
Film 6 6 81 6 9 6 176 6 6 10083 9849 19992 6 0 10253 9855 20166 0 0 199 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								A	unual catch	12							
Film 0 81 9 90 63 662 7079 14604 63 6943 7688 14694 0 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Albacore	0	170	•	176	9	10083	6986	19992	9	10253	9855	20168	0	61	-	50
tunes	Yellowfin	0	18	۰	06	63	6862	7679	14604	59	6943	7688	14694		80	-4	ø
tunes	tuna											• •					
Tunes 0 * * * * * * * * * * * * * * * * * *	Bigeye	0	52	-	27	₩	2296		3624	©	2322	1321	3651	O	~	*	~
tunes 0 277 16 293 131 19267 18941 39339 131 19544 18957 36632 0 29 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Bluefin	0	•	0	•	•	9 1	11	33	•	9	1.7	33	•	c	0	•
tunes 0 277 16 293 131 19267 18941 39339 131 19544 18957 38632 0 29 2 In	Skipjack	0	*	•	•	•		76	96	•	01	2	88	0	•		. ♦
Line 0 277 16 293 131 19267 18641 36339 131 19544 186339 131 19544 1863 131 1954 260 263 1172 3996 5436 2649 1172 3436 2649 1226 4469 3505 0 6 3 3 4 <td>tuna</td> <td></td> <td></td> <td>-</td> <td></td>	tuna			-													
1		0	277	91	293	131	19261	18841	38339	131	19544	18957	38632	o	53	2	31
1	4							An	nual catch								
In	Blue	0	98	13	69		1172	3996	5436	268	1228	6004	5203	•	•	, ,	11
lish 0 2 3 3 5 6 80 1250 1338 8 82 1253 1343 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Striped	0	60	'n	=	12	437	3216	3665	12	4 45	3219	3676	0	*	•	*
1	marlin Swordfish	0	~	m	'n	•	80	1250	1338	60	85	1253	1343		*	**	-
lish 0 2 1 3 3 58 3106 3167 3 60 3107 3170 0 * 0 111fish 111fish 2 2 96 295 1912 13207 15414 295 1986 13229 15510 0 9 4 Annual catch 2 1 24 166 191 0 0 0	Black	•	٠	N	€	•	165	1639	1808	; →	171	1641	1816	0	-	•	-
billfishes 0 74 22 96 295 1912 13207 15414 295 1986 13229 15510 0 9 4 Annual catch ² 0 0 * * * 1 24 166 191 1 24 166 191 0 0 0	Spearfish 6 sailfish	0	N	.	m	n	8 0	3106	3167	m	•	3107	3170	•	*	٥	
Annual catch ² 0 0 * * 1 24 166 191 1 24 166 191 0 0	Total billfishes	•	7.4	22	96	295	1912	13207	15414	295	1986	13229	15510	0	٥	•	13
0 0 * * 1 24 166 191 1 24 166 191 0 0								Ą	nuel catch	7_							
	Wahoo	•	0	•	*		54	991	161	-	*2	1 66	161	o	0	0	0

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

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Table 43. -- Estimated catch and effort by foreign longliners based at American Samoa, 1973.

							(4)		Ī		(848)			244.52	Vithin 50 mi	
•		Inside	inside FCZ (A)			Outside FCZ (B)	(9)			Entire area (A+0)	3			100		
TR . T	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Taiwan	Korea	Total
							Monthly	Monthly nominel effort ¹	ffort							
į	•	,	. •		c	1208	1200	2498	. 0	1245	1294	5533		n	•	M
Salvan y			M	100	• 0	6111	1279	2398	•	1611	1292	2483	•		•	
March	• •		m	58	•	1362	8441	2830	6	1041	1451	2858	•	-	o	
April		9		7.5	0	1707	1946	3653	•	2773	1953	3728	0	±	4	*
,	• •	50	10	10	0	2069	2951	5020	0	2089	2966	5055	o	0	0	0 1
June	0	3	32	*	0	2221	2851	5072	0	2263	2883	5146	o	0	0 (o (
July	•	28	11	39	0	2474	2684	5158	•	2502	2695	2618	•		(N •
August	0	88	•	38	0	5223	2793	5022	•	2267	2793	2060	· ·	(• •	- :
September	0	\$	10	7.5	0	1361	2365	3746	•	1446	2375	3821	5	<u>.</u>	٠ د	• •
October	0	9	33	101	0	1311	2115	3426	0	137	21.50	3527	0 (- ;	¥	v •
November	0 (60 !	2 °	121	0	1452	2367	3819	00	1561	2470	0 4 1 4	9 0	- P	o #	Ē
December		173	7	2	•	cae i		,	,							
Total	0	743	144	188	0	20058	26557	46615	Ö	20801	26701	47502	0	7.7	٥	86
							*	Annuel catch ²	7.							
Albacore	0	268	39	307	•	13118	16723	29841	•	13386	16762	30148	•	5	N	56
	,			-	,				•		,	. 366.	•	:	-	12
Yellowfin	•	105	30	*	0	4296	7612	11906	0	104	160/	76871	>	:	•	<u>!</u> .
Bigeye	0	33	۰	:	0	2253	2916	5171	6	2288	2927	5215	•	n	•	n
tune Bluefin	0		•	•	۰	6	•	9	6	61	6	80	•	٠	0	*
tuna	,	•					•	0.	c	F.C	101	011	o	*	•	
Skipjeck tuna	Þ	-		-	•	7										,
Total tunas	0	409	67	964	•	19708	27409	47117	0	20117	27496	47613	D	38	n	14
						<i>'</i> .	¥	Annual catch ²	7							•
Blue.	•	63	11	106	•	1326	2393	3719	•	6141	2406	3825	0	. 2	*	2
marlin Striped	•	•	P 1	22	•	018	1785	2295	. •	510	1798	2316	0	••	•	••
marlin Swordfish	•	m	۰	12	•	8	693	780	•	8	702	800	0	~	0	-
Black	•	•	٠	101	. •	207	1,090	1297	•	211	1096	1307	0	٠	-	•
mariin Spearfish 6 seilfish	0	•	N	•	b	124	1432	1556	6	128	**	1562	ø.		*	-
Total bilifishes	•	112	2.	155	0	2262	7393	9655	0	2374	7436	0196	Ð	18	-	10
							7	Amuel catch ²	2.							
Vahoo	•	N		M	•	32	380	412	•	ń	381	\$14	•	4	•	-

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 44. -- Estimated catch and effort by foreign longliners based at American Samoa, 1974.

		inside FCZ (A)	FCZ (A)			Outside FCZ	FCZ (8)			Entire area	(A + B)			WithIn 50	50 ml.	
. 7	Japan	Talwan	Korea	Total	Japan	Taiwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total
							Monthly	Monthly nominal effort ¹	affort ¹							
James	G	111	12	123	,0	1137	1562	2699	0	1248	1574	2822		27	*	31
February	0	*	in.	69	0	108	1335	2136	•	865	1340	2205	0	101	*	13
March	0	35		36	•	949	1470	2419	0	984	1471	2455	0	-	•	
April	9	42	*	42	0	1498	1822	3320	0	1540	1822	3362	0	'n	•	S)
May	0	2	-	25	0	2131	1842	3973	•	2205	1843	4048	0	0	0	On I
June	0	204	17	221	0	1705	1712	3417	•	6061	1729	3638	0	78	51	6
July	0	47	หา	52	0	1729	1881	3610	0	1776	1886	3662	0	32	-	MM
August	0	36	-4	37	0	666	1475	2474	0	1035	1476	2511	•	87	•	9 !
September	0	4.5	22	67	0	956	1094	2020	•	971	1116	2087	0	12	_	<u> </u>
October	0	811	21	139	0	1270	1475	2745	0	1388	1496	2884	0	S :	,,	9 9
November	0 0	125	→ 0	159	• c	1622	1553	3175	0 0	1572	1587	3305	•	<u>.</u>	- *	<u>.</u>
	,		•	3	,			1	,							
Total	0	928	128	950.1	0	16312	18945	35257	0	17240	19073	36313	0	252	23	275
-							Ā	Annual catch ²	24							
Albacore	o	256	22	268	0	7598	6755	14353	•	7864	6777	14941	0	92	'n	18
	1	1	! !		•											
Yellowfin	•	125	24	6+1	•	2275	5943	8220	•	2400	8969	8369	•	SO .	52	10
Bigeye	0	53	v	9	0	1416	. 2474	3890	•	1471	2479	3950	0	12	-	13
tune	•	•	4	•	•		7	. 5	c	•	*	2	•	•	6	•
tuna	9	•	•	•	•	2	,	;	•	2	;	;	•		•	
Skipjack	0	••	*	-	0	~ . '	•	8	• .	•	₩	9	0	•	•	•
Total tunas		447	15	498	•	11314	15256	26570	۰	11761	15307	27068	o	138	12	159
							A	Annual catch ²	2,							
8 lue	0	12	8	6	•	720	1528	2248	0	161	1546	2337	0	23	60	29
marlin	•	:		9		402	911	1441	Ċ	81.6	1143	1461	0	m	••	•
marlin	,	:	•	2	•	3			?) ; ;	•					•
Swordfish	0	m		•	•	86	437	838	•	101	438	6 PS	•	-	•	
Black	•	::	m	:	•	124	914	938	0	135	917	952	Φ.	•	<u>.</u>	10
mariin Spearfish	۰		N	۰	0	9	798	967		92	900	876	•	•	*	*
& sailfish	•	•)													
Total billfishes	0	106	82	134	o	1315	4716	1609	0	1421	4744	6165	0	33	2	2
		-					An	Annual catch ²	2.							
Wahoo		N		m		32	357	686		*	338	392	•	•	•	*

¹Effort in vessel days, * = < l vessel day.

²Catch in metric tons, * = < l mt.

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Table 45. -- Estimated catch and effort by foreign longliners based at American Samoa, 1975.

		Inside FCZ (A)	FCZ (A)			Outside FCZ (8)	(8) 73.			Entire area (A+8)	a (A+8)			Víthin	Vithin 50 mi.	
. •	Japan	Talwan	Korea	Total	Japan	Taiwan	Korea	Total	Capan	Talwan	Korea	Total	Japan	Talwan	Korea	Total
							Month!	Monthly nominal effort ¹	iffort ¹							
, and a second	•	7		9	•	2145	1644	2789		181	1667	2848	•	0	11.	1.1
February	•	3 #	9 6	9	0	969	1129	1825	0	730	1158	1888	0	13	•	FT.
March	• •	•	35	36	0	603	1344	1947	•	607	1376	1983	•	0	N	~
April			N	m	•	755	1329	2084	0	756	1331	2087	0	0.	0 (0 (
Hay	•	•	*	12	•	963	1183	2146	0	116	1187	2158	0	# 1	N (N (
June	0	20	-	12	0	748	1215	1963	0	768	1216	1984	0 (o 4	•	D 4
July	0	•	*	ø	•	655	1404	2059	0	661	404	2002		* (.	
August	o	<u>.</u>	2.5	8 P	0	578	1143	1721	o (5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	1168	1756	0 6	y c	0 -	• -
September	0	80	56	•	0	571	970	1541	0 (6 to 6	0	0001	,	ď	• •	• 6
October	0	508	M M	245	0	427	926	5551	•	070	\$0 °	1000 8041		n eq	9	67
November December	0 6	31	- • •	612	0	999	933	1301	• •	397	666	1396	0	m	ိဗ္ဗ	33
	، ۱							9.000		24.82	10401	22873	0	135	11	212
Iotai	•	575	280	goo	-	100	11761	25010	,							
							Ā	Annual catch ²	. 21			•				•
Albacore	9	347	96	433	0	3981	3426	7407	0	4328	3512	7840	0	18	27	***
Yellowfin	o	6	m 4	72	0	1782	\$209	1669	0	1181	5252	7063		s n	91	21
tuna	,	;	i	;	. (į	,	0	c	140	4804	5045	•	. *	10	
Sigeye	0	92	E .	57	•	0 0 0	700	00	>		3	}	•	•		
Bluefin	0	,*	*	*	•	•	•	52	•	•,	80	22	•	*	*	*
tuna	•	*		*	o		F 1	17	•	•	£ 1	1.1	•	•	٠	*
tuna	•	•		•	•				-							
Total tunas	0	402	160	295	0	6706	12719	19425	0	7108	12879	1 9987	٥	96	48	=
							¥	Annual catch ²	21							
Blue	0	21	17	38	0	259	673	932	ю	280	9	970	0	v o	SO.	10
marlin	,	•	į	i	•	:	,		•	[6]	14.	6	٥		•	0
Striped	0	đ	62	รี	•	0	70,	D 0	•	:		})	1		
Swordfish	0	n	•	~	•	25	287	312	•	28	291	319	0	-	-	٧.
Black	•	m	25	28	•	:	468	515	, 0	**	403	240		-	•	•
marlin Spenfish	c	-	1 0	•	•	91	688	575		11	\$64	185	0	•	-	•
s sailfish	•	•	•) .	•											
Total billfishes	0	*n	76	110	0	654	2739	3198	0	493	2815	3308	0	60	23	31
							¥	Annual catch ²	1.5							
Wahoo	0			N	•	01	131	1+1	•	:	132	2	0	•	•	*

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 46.--Estimated catch and effort by foreign longliners based at American Samoa, 1976.

		Inside	Inside FCZ (A)			Outside FCZ (B)	£CZ (8)			Entire area (A+B)	& (A+B)	'		Vithin 50	50 mi.	
	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total	Japan	Talwan	Korea	Total
							Month	Monthly nominal	effort1							
January	•	3	4	109	c	375		***	•	9,4		,	•	•	•	;
February	0	32	28	3	• •	\$ 14	998	1281	• •	447	908	1451	5 6	0 6	0 0	?
Zerch Serch	•	61	33	52	0	361	1153	1514	•	380	1186	1566	• •		۱ ۸	• •
April	0	01	91	56	0	330	1 022	1372	0	360	1038	1398	0	-	· N	P
, je	0	S	50	S	0	;	1275	1716	0	456	1295	1751	•	•	-	2
	0	;	•	•	0	521	1371	1892	0	522	1378	1900	0	ø	0	•
July	0	80	V O	52	0	678	1961	2239	0	698	1566	2264	0	13	0	2
1sn6m	0	6	* . *	23	0	624	1540	2164	0	643	1544	2187	0	•	-4	10
September	0	2	6 0	99	0	748	666	1747	0	799	1001	1806	0	•	-	•
Uctober	0	8	21	113	0	860	1353	2213	•	952	1374	2326	0	01	N	12
	o 6	153	0 (M	183	0	890	1368	2258	0	1043	1398	2441	0	21	٥	22
	٥	911	s p	126	0	968	1528	2496	0	1086	1536	2622	0	6	0	61
Total	0	594	225	619	0	7231	15069	22300	0	7825	15294	23119	0	88	25	118
				1			¥	Annual catch ²	2,							
	•	!	1													
Albacore	•	328	\$	382	0	5763	8382	5+1+1	0	1609	8436	14527	•	ŝ	•	*
Yellowfin	0	67	6	116	•	1374	5559	6933	0	1441	5608	7049	0	13	v	20
Bigeye	0	8	0	2	0	658	3371	\$000	0	80	3419	4077	0	¥ī	M	C
tuna Bluefin	c	•	. •	"	•	۴	:	;	,	•		,	•		. •	
tune	•		•	•	>	,	•	:	>	າ	•		5	•	•	•
Skipjeck tune	•	•	•	*	•	w	91	21	o .	I O	91	21	•	•	•	
Total tunas	۰	454	151	575	•	****	17342	25116	0	8618	17493	16957	0	66	16	2
							An	Annual catch ²	7							
Blue	•	:	12	8	•	256	764	1020	•	300	477	1076	0	•	1	Ó
Striped	0	•	^	11	•	120	844	8	đ	124	* *	270	•			٨
merlin	,			:	1	;)	}	•	•	}	;	•	•	•	•
Swordt i sn	0	N	~	•	0	Ą.	266	311	0	1	273	320	•	-	•	N
Black	0	m	0	13	•	8	*	525	, •		474	533	•	•	••	-
Spearfish	•	m	El	91	•	•	809	489	•	ä	618	670	0		-	in
• Salitiga												,				
Total bilifishes	ø	8	64	105	0	528	2547	3075	•	564	2596	3180		٥	50	2
						,	Ą	Annual catch ²	2							
Vahoo	•	~	11	13	•	5	311	335	0	8	322	348	0	*		**

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

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Table 47.--Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1965.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
		H	onthly nomi	nal effo	rt ¹	
January	- t 8	165	105	10	67	. 365
February	19	58	60	. 3	186	326
March	7	. 5	1 03	. 9	152	276
April	. 8	23	74	27	40	172
May	32	41	93	87	. 64	317
June	5	5	. 7	121	278	416
July	6	o	83	91	123	303
August	1	. 0	87	105	51	244
September	8	1 -	45	114	123	291
October	íž	3 .	. 15	. 3	42	75
November	9	29	38	24	.	96
December	Í	10	21	0	•	34
Total	124	340	731	594	1126	2915
,			Annua t	catch ²		
Albacore	1 4	10	1	16	47	88
Yellowfin	13	150	368	614	977	2122
tuna Bigeye	17	230	372	195	400	1214
tuna Bluefin	•	. •	. •	•	•	
tuna Skipjack tuna	•		•	5	. 8	18
Total tunes	44	391	745	830	1432	3442
			Annual	catch ²		
Blue marlin	11	43	76	52	116	298
Striped	44	54	46	. 3	8 .	155
marlin Swordfish	5	3	11	11	6	36
Black	•	2	6 -	6	9	23
mariin Spearfish 6 sailfish	. 3	3	9	11	9	35
Total billfishes	63	105	148	83	148	547

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 48.--Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1966.

	Wake	Johnston	Palmyra- Klngman	Jarvis	Howland- Baker	Tota
		М	onthly nom	inal effor	rt¹	
January	16	39	15	5	4	79
February	7	21	81	2	13	124
March	. 6	é	29	5	19	67
April	*	42	57	7	*	106
May	3	40	126	36	12	217
June	2	*	17	34	171	224
July	; O	o	. 5 ·	14	168	187
August	o	0	54	15	51	120
September	0	2	17	4	55	78
October	0	4	7	22	89	122
November	0	21	. 0	20	51	92
December	2	27		, t ,	28	58
Total	36	204	408	165	661	1474
			Annua 1	catch ²		
Albacore	17	6	. 1	15	25	64
Yellowfin	6	69	166	121	724	1086
tuna Bigeye	10	216	270	58	194	748
tuna Bluefin	0	0	•	*	*	
tuna Skipjack tuna	*	2 - 1	1	, 1	. 3	7
Total tunas	33	293	438	195	946	1905
			Annual	catch ²		
Blue	2	35	43	11	82	173
marlin Striped	2	29	17	, 1	•	53
marlin Swordfish	1	. 2	5	3	8	19
Black	•	1	3	2	8.	14
marlin Spearfish & sallfish	*	3	7	. •	12	26
Total billfishes	5	70	75	21	114	285

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 49.--Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1967.

	Velte	Jahnsten	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
			onthly non	inel effor	ęt	
January	60	34	7	2		60
February	. 26	51	142	1	•	231
Herch	35		262	•	40	341
April	5	132	71	7	21	236
lay .	16	15	91	40	134	274
June	. 13	1	•	21	141	100
Mly	•	•	47	69	25	167
August	ė	•,	67	27	13	107
Saptember	•	•	.44	24	36	106
October	•	•	•	2	86	•t
November	•	23	·	3	10	41
Becenber	•	188	109	•	2	120
Total	414	271	677	200	520	1962
• .	-		Annual	catch ²		
Albecora	66	14 .		2	•	92
Yel lad in	5	••	300	179	455	1099
tune Bigaye	•	302	414	73	150	1140
tune Divefin	•	•	•	•	•	•
tuna Skipjack tuna	•	•	3		2.	•
Total tunes	••	396	776	255	414	2341
·.			Annuel	cotch ²		
91wa	•	65	96	22	63	255
moriin Striped	11	25	43	2	•	01
mortin Swordf.ish	. •	•	20	. •	4	30
Block	. •		9	2	5	13
mortin Specifish & solifish	•	•	20	3	•	•1
Total billfishes	50	100	104	33	95	421

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 50.--Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1968.

2 H43	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baket	Tota
*	1, - 1	м	onthly non	inal effo	ort ¹	,
January	5	. 11	83	** 2	1	102
February	3	35	38	52	•	128
March	12	22	55	52	20	161
April	9 .	13	51	135	35	243
May	24	. 4	55	63	93	239
June	12	- 2	77	82	100	273
July	46	2	26	25	7i	170
August	38	0,	44	8	34	124
September	0	*	25	2	10	37
October	2	*	5	13	16	36
November	12	• 1	· . b	6	18	· 37
December	34	1.4	5	t o	5	54
Total	197	90.	464	450	403 .	1604
•			Annual	catch ²		,
Albacore	37	4	. •	10	12	63
Yallowfin	26	29	277	340	331 **	1003
tuna Bigeye	38	81	217	187	117	640
tuna Bluefin	. 0	o	· · · · ·	0	0	
tuna Skipjack tuna	•	*	Ŋ 6	9	2	17
Total tunes	101	114	500	546	462	1723
			. Annua1	catch ²		
Blue	36	21	51	31	44	- 183
marlin Striped	24	9	17	* # 3	5 . *	56
marlin Swordfish	2	. 1	6	. 11	A	24
Black		7 •	a a .	` : ' 3	3	9
marlin Spearfish & sailfish	7	19 1	13	# 14	2 *	
Total bilifishes	69	32	90	62	964 58 L	* 311

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt. communic and

Table 51. -- Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1969.

	Wake	Johnston	Paimyrs- Kingman	Jarvis	Howland- Baker	Tota
		н	onthly nomi	nal effo	rt ¹	
January	3	27	•	25	9	68
February	. •	8.	246	33	35	329
Merch	. 5	17	111	21	126	280
April .	2	48	33	38	29	150
Hay	16	12	82.	23	62	197
June	2	1	211	51	32	297
July	o		42	13	53	109
Augus t	2	0	3	2	7	14
September	1	•	1	1	45	48
October	14	1	16	12	46	91
November	7	25	37	11	35	115
December	ø.	20	5	7	88	120
Total	56	160	791	237	572	1818
<u></u>			Ánnuat	catch ²		
Albecore	6	11	1.	5	13	36
Yel lowfin	19	45	353	218	498	1133
tuns Bigaye	12	187	613	101	203	1116
tuna Bluefin	•	0	•		0	•
tuna Skipjack tuna	. •	. 1	3	3	1	6
Total tunes	37	244	970	327	715	2293
			Annual	catch ²		
Blue	6	34	100	21	57	216
meriin Striped	6	13	24	3	4	50
merlin Swordfish	1.	2	13	, 6	5	21
Black	•	•	6	1	3	10
merlin Speerfish 6 sailfish	•	. 6	10	3	3	21
Total billfishes	13	35	153	34	72	321

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 52.—Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1970.

***************************************	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	-Total
		M	onthly nomi	nal effo	rt¹	
January	0	16	15	0	15	46
February	. 16	46	166	8	12	250
March	1,1	55	219	6	15	296
April .	. 0	67	235	12	8	322
Hay	3	25	100	36	2	166
June	4	11	162	52	47	276
July	7	5	47	46	94	199
August	15	1	78	72	99	265
September	14	8	21	5	209	257
October	10	5	16	13	47	91
November	•	61	1	*	0	. 82
December	1	40	15	1	15	72
Total	71	360	1077	251	563	2322
			Annua1	catch ²		
Albacore	15	16	2	2	2	37
Yellowfin tuna	16	202	879	253	466	1816
Bigeye tuna	14	351	595	74	153	1187
Bluefin tuna	0	0	•	0	o .	0
Skipjack tuna	1	2	12	. 2	2	19
Total tunas	46	571	1488	331	623	3059
	,		Annual	catch ²		•
Blue mariin	17	99	144	24	66	350
Striped marlin	3	40	32	2	4	81
Swordf.Ish	1	5	50	5	•	37
Black marlin	•	*	5	2	3 ·	11
Spearfish Sisailfish	1	10	14	•	* • • • • • • • • • • • • • • • • • • •	33
Total billfishes	22	155	215	37	83	- 512

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 53.—Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1971.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
		н	onthly nomi	nal effo	rt ¹	
January	•	14	44	•	16	74
February	, 3	73	68	2	5	151
Harch	26	28	283	7	26	370
April	17	64:	57	28	•	166
May	. 2	36	110	92	86	326
June	18	11	57	59	264	409
July	8	28	73	53	92	254
August	10	6	45	34	26	121
September	. •	18	29	4	t	58
October	15	14	17	2	26	74
November	. 0	8	57	0	3	6
December	14	10	34	• 0	•	50
Total	113	310	874	281	545	212
			Annua 1	catch ²		
Albacore	40	6	1	3	2	5
Yellowfin	19	66	260	169	397	91
tuna Bigeye	18	279	469	116	188	107
tuna Bluefin	0	0	o	0	0	
tuna Skipjeck tuna	0	1	4	ŧ	2	
Total tunes	77	352	734	289	589	204
			Annual	catch ²		
Blue	22	53	49	9	35	16
marlin Striped	. •	18	45	1	4	7
marlin Swordfish	į	. 7 -	20	6	10	4
Black	•	ı	3	1	5	1
mertin Spearfish & sailfish	•	•	13	3	5	2
Total billfishes	27	83	130	20	59	319

¹Effort in vessel days, * = < 1 vessel day.
²Catch in metric tons, * = < 1 mt.

Table 54.--Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll. Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1972.

a.	Wake	Johnston	Palmyra- Klingman	Jarvis	Howland- Baker	Tota
		M	lonthly nom	inal effo	rt¹	
January	t	3	81	. 0	0	85
February	7	1	39	•	25	72
March	•	44	134	-1	17	196
Ápri 1	4	31	208	22	3	268
May	7	69	65	24	81	246
June	*	30 -	144	88	75	337
July	0	24	1 52	1 08	93	377
August	0.	33	64	63	153	313
September	t -	3	45	34	159	242
October	Ö	3	88	25	35	151
November	ø	9	ii .	5	4	29
December	*	19	15	0	10	44
	,	· · · · · · · · · · · · · · · · · · ·				
Total	20	269	1046	370	655	2360
	. *		Annual	catch ²		
Albacore	2	12	• .	3 -	1	16
rel lowf in	3	43	515	269	424	1254
tuna Bigeye	3	252	521	149	328	1253
tuna Bluefin	•	0	0	0	. •	•
tuna Skipjack tuná	0	ı	3	2	i , ,	7
fotal tunas	8	308	1039	423	754	2532
		· .	Annua 1	cetch ²		
live	2	72	114	40.	. 88	316
merlin Striped	2	18	19	2	3	44 -
máritn Swordfish	1	8	25	8	7	49
Black	i	1	8	3	12	25
meriin Spearfish B salifish	* .	4	6	2	3 .	15
Total billfishes	6.	103: :	172	55	113	: 449

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 55.--Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1973.

	. Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Total
		, see 1, 1, a K	onthly nomi	nal effo	rt ¹	
anuary	•	54	77	. 1	13	145
ebruary	, 2	37	62	1	2	104
lerch	15	66	270	1.	16	365
April	10	54	135	2	3	204
lay	: ♦	23	26	18	13	74
lune	0	34	21	• 7	18	80
iuly	. 0	-6	21	19	83	129
lugust	• 0	15,	49	25	35	114
September	0	10	12	3	4	ė 29
October	-0	1.1	1	0	. 5	17
November	: O	20	1	3	. 0	24/
December	•	25	•	0	4	29
lotal	31. ,	345 n	675	70	196	1317
•			Annual	catch ²		
Albacore	•	19	•	1	• 1	25
Yellowfin	3	80	78	21	94	276
tuna Bigeye		303	360	48	80	798
tuna Bluefin	.0	•	.0	0	•	
tuna Skipjack tuna	•		1,	•	•	2
Total tunes	14.	403.,	439	70	175 %	1101
			Annual	catch ²		
Blue merlin	-3	46,	44.5	2	iz	107
Striped	3	1.6;	25	1	1	46
marlin Swordfish	3	₹:	31	2	2	45
Black	•	2	2	•	2	: 6
merlin Spearfish & sallfish	1	, 6	7	4	2	1.7
Total billfishes	10	77	109	6:	19	221

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 56.--Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1974.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
		H	onthly nomi	inal effo	rt¹	
January	. 0	34	46	* •	8	88
February	6	54	181	1	1	243
Harch -	15	. 63	94	3	3	178
Apr11	ð,	302	281	5	2	598
Hay	1.4	94	75	17	7	207
June	•	8	38	31	42	123
July	2	30	46	29	89	196
August	•	41	. 7	t	70	119
September	3	24	8	8	. 8	51
October	0	15	31	27	36	109
November	2	56	35	4 ,	6 .,	toi
December	5	80	1	. 0	52	138
Total	59	801	843	120	324	2153
			Annual	cetch ²		
Albacore	5	49	1 ·	•	•	55
Yellowfin tuna	4	148	186	39	98	477
Bigoya tuna	10	380	373	46	149	958
Bluefin	0	•	0 .	0	ó	
tuna Skipjack tuna	•	2	2	•	•	
Total tunas	19	579	564	85	247	1494
	8.8.		Annual	catch ²		
Blue marlin	4	61	61	7	. 13	146
merin Striped merin	•	11	15	1,	1	34
meriin Swordf.ish	5	9	32	2	•	52
Black	•	1	•	• ,	1	·, . 6 ·
merlin Speerfish & sellfish		7	5	2	2	16
Total billfishes	15	89	117	12	21	254

*

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 57. -- Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1975.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
	t		onthly nomi	inal effor	t ¹	
January	15	32	67	. 1	18	× 133
February	67	123	49	,	26	265
Harch	21	54	6 t	3	36	175
April .	4.	42	.35	0	5 .	83
lay	ø	36	17	3	0	56
June	0	17	4	•	26	47
July	0	.3.	Ö	., o	52	55
Augus t	.0	10	3	10	26	49
September	0	23	7	16	96	142
October	O	31		9	77	121
November	10	23	0	16	•	49
December	1	15	, 6	13	•	35
lotal .	118	409	253	71	359	1210
			Annual	catch ²		
Albacore	11	27	•	3	2	. 43
Yellowfin	12	85	43	16	120	276
tuna Bigeye	53	31.9	1 02	39	136	.649
tuna : Bluefin	, 0	•	0	0	0	,×, •
tuna Skipjack tuna	•**	•	ı	, •	, •	
Total tunas	76	431	146	56	256	969
			Annual	cetch ²		
Blue	3	17	7	2	8	37
merlin Striped	. •	13		, •	2	27
marlin Swordfish	- 7	. 7	6 .	. 2	3 -	25
Black	•	•	, i	•	•	1
mariin Spearfish & sellfish	- \$	•	5	3	1 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	. 14
Total billfishes	15	41	27	.7	14	104

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 58.--Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1976.

	Vake	Johnston	Palmyre- Kingman	Jarvis	Howland- Baker	Total		
		M	onthly nom	inal effo	rt ¹			
January	7	19	11	11	47	95		
February	24	57	7	0	26	114		
March	- 19	49	102	i	62	233		
April	ŧ o	33	77 .	8	34	162		
May	0	29	10	7	64	110		
June	0	. 28	50	35	22	135		
July	٠	29	53	32	32	146		
August	3	29	21	5	12	70		
September	. 0	18	1 28	4	15	165		
October	•	10	31	11	86	138		
November	4	1	11 .	13	15	44		
December	•	2	· 3	o	33	38		
Total	67	304	504	127	448	1450		
	Annual catch ²							
Albacore	16	16	1		ı	35		
Yellowfin tuna	6	68	119	67	275	535		
Bigeye tuna	18	265	204	44	161	692		
Bluefin	0	• ,	. • •	ø	*	. •		
tuna Skipjack tuna	•	•	1	15.	•	i		
Total tunes	40	349	325	112	437	1263		
			Annual	catch ²				
Blue marlin	. 3	34	48	· g	31	125		
Striped	3	10	28	1	1	43		
marlin Swordfish	. 8	9	. 12	3	6	38		
Black		1	1	•	1	3		
marlin Spearfish & sailfish	1	3	5	ı	1	11		
Total billfishes	15	57	94	14	40	220		

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 59. -- Estimated catch and effort by Japanese longliners in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1977.

	Wake	Johnston	Palmyts- Klingman	Jarvis	Howland- Baker	Tota		
***************************************		, M	onthly nomi	inal effor	t¹			
January	96	11	*	. •	104	21 t		
February	64	35	48	0	36	183		
Harch	17	73	31	1	99	221		
April _	٠,	20	. 34	t	21	8,0		
Hay	0	37	11.	. 1	6	55		
June	•	55		•	7	63		
July	0	14	2	1	31	48		
August	0	4	8	15	7	. 34		
September	0	*	3	3	54	60		
October	0	•	0	. 3	152	155		
November		. •	1	•	129	130		
December	7	. 6	33	•	78	128		
Total	188	255	172	29	724	1368		
	Annual catch ²							
Albacore	57	14	1	1	7	80		
Yellowfin	7	41	39	12	609	708		
tuna Bigaya	78	276	98	17	338	807		
tuna Bluefin	•	. 0	. 0	0	٠,	. *		
tuna Skipjack tuna	•	•	1 .	• .	●.	1		
Total tunes	142	331	139	30	954	1596		
			Annua 1	catch ²				
Blue	•	23		2	56	93		
merlin Striped	3	7	2	•	2	14		
merlin Swordfish	9	8	3	. •	11	31		
Black	. •	•	ı	•	3			
merlin Spearfish & sellfish	•	1	,•	•	2 .	3		
Total billfishes	16	39	14	2	74	145		

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 60.--Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1967.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
	÷	. н	onthly nomi	nal effo	rt ⁱ	
January	0	ō	0	0	O	Ö
February	0	o	0	0	0	. 0
March	0	• •	0	0	0	o'
April	0	·o`.	Ö	0	.0	0
May 🕙	. 0	0	0	26	0	26
June	0	D	0	0	. 0	0
July	0	0	0	ö	0	ó
August	ø	0	16	55	10	81
September	•	io	0	10	9	29
October	0	56	0	0	0	56
November	0	1	. 0	29	0 24	30
December	0	0	. 0	0	. 0	, o
Total	0	67	16	120	19	222
•		- · · · · · ·	Annua 1	catch ²		
Albacore	0	103	32	201	32	368
Yellowfin	0	27	8	74	4	113
tuna Bigeye	•	34	16	8t ·	6	131
tuna Bluefin	o	0	0	0	o	0
tuna Skipjack tuna	Ö		0	0	o ,	•
Total tunes	0	164	50	356	42	612
			Annual	catch ²		
Blue	0	3	•	11	. 1	15
marlin Striped	o	0	•	1 .	•	1
marlin Swordfish	0	£ 1	•	1	•	2
Black	Ö	•	0 .	0	•	*
meriin Spearfish 8 sallfish	0	o	0	0	0	•
Total billfishes	0	<u> </u>	•	13	1	10

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 61.--Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1968.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota	
		×	onthly nom	inal effo	rt ¹		
January	0	0.	0	•	1	. 1	
February	. 0	3	ø	18	24	45	
Harch	0	0	ø	20	12	32	
April	0.	Ö	0	58	19	77	
Hey	0 .	. 0	0	46	• 1	46	
June	0	10	• 0	2.	to	22	
July	. 0	0	3	4	33	40	
August	o.	0.	0	0	46	46	
September	0	0	0	2	17	19	
October	0	0	t	31	14	46	
November	0	0	2	30	17	49	
December	0 .	0	•	3	6	9	
Total	0	13	6	214	199	432	
		Annual catch ²					
Albacore	0 .	ЗÍ	5	320	163	519	
Yellowfin	ò	13	•	73	257	347	
tune Blgaye	0	5	2	34	51	92	
tuna Bluefin	0	•	. 0	í	21	22	
tuna Skipjack tuna	. 0	•	0	•	•	0	
Total tunes	•	49	11	428	492	980	
			Annua	catch ²			
\$1ue	0	2	•	12	9	23	
moriin Striped	0	•	0	2	• .	2	
mariin Swordfish	0	. 1	0	•	1	2	
Black	•	0	6	1	1 -	2	
merlin Speerfish 8 sellfish	ø	•	. 0	0	•	•	
Total billfishes	0	3	*	15	11 -	29	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 62.—Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1969.

	Wake	Johnston	Palmyra- :Kingman	Jarvis	Howland- Baker	Tota
		М	onthly nom	inal effo	rt ¹	
January	0	. 0	0	ø	52	52
February	0	0	0	0	2	. 2
March	. 0	0	·. O	0	21	21
April	0	o .	0	. 0	1	. 1
Hay	. 0	. 0	0	. 0	0	10 TO
June	0	0	0	- 0	17,	-17
July	0	. 0	· Ó	0	. 0	: 0
August ,	o	0	0	0	0	. 0
September	0	0	0	. 0	0	0
October .	0	. 0	0	0	0	0
November	. 0	o	o	0	0	. 0
December	0	0	33	0	0	. 33
Total .	0	0	33	0	93	126
	Annual catch ²					
•			Annua	catch-		
Albacore	0.	-0	21	• .	73	94
Yellowfin tuna	0	Ö	27	0	52	79
Bigeye	0	0	6	ø	12	18
tuna Bluefin	o	0		. 0	4	
tuna Skipjack tuna	0	0	0	•	•	•
Total tunas	0	0	54	0	141. , .	195
			Annual	catch ²		
Blue	0	•	. 2	0	8	10
marlin Striped	0	0	0	0	•	2 •
marlin Swordfish	,0	0	0	0	•	•
Black	0	0	0	. 0	2	2
merlin Spearfish 8 sallfish	o .	0	0	0	1 .	1 .
otal billfishes	o o	0	2	0	11	-13

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 63.--Estimated catch and effort by longliners of Taiwan in the FGZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1970.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota			
		М	onthly nomi	nal effo	rt¹				
lanuary	0	. 0	23	0	0	23			
February	. •	0	0	, 0	0	0			
larch	. •	0	0	0	0	0			
April	ø	0 ,	0	0	0	•			
lay	0	ø	0	.0	7	7			
lune	0	0	0	•	10	10			
July	0	•	0	0	ø	•			
August	0	0	0	0	6	6			
- September	0	•	0	0	0	0			
October	,0	o	0	0	. 1	1			
November	0	0	0	o	0	0			
December	0	0	0	0		. 0			
Total	0	0.	23	•	24	47,			
			Annua 1	catch ²					
Albacore	0	0	21	•.	23	. 44			
Yellowfin	0	0	19	•	16	35			
i tuna Bigoya	0	0	8	•	6	14			
tuna Bluefin	0	o	0	0	o ·	. 4			
tuna Skipjack tuna	0	0	0	•	0	đ			
Total tunas	0	. 0	48	•	45	93			
		Annual catch ²							
81ue	0	0	ı	0	1	8			
mariin Striped	0	0	0	0	•	•			
mariin Swordfish	0	0	•	0	•				
Black	•	0	•	. 0	•	•			
merlin Speerfish & sællfish	0	•	•	0					
Total billfishes	0	0	1	•	1				

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 64.--Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1971.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Total		
		м	onthly nom	inal effo	rt¹			
January	0	0	0	o	5	. : 5		
February	0	. 0	o	o	2	2		
March	. 0	o	o	o	8	8		
April	0	0	o	2	14	16		
May		0	0	0	19	19		
June	0	o	0	o	7	7		
July	• 0	0	0	ø	19	19		
August	0	0	0	. 0	5	5		
September	0	0	0	0	4			
October .	0	o	0	0				
November	0	0	o	o	1	1		
December	0	0,	0	0	0	0		
Total	0	0	0	2	85	87		
	Annual catch ²							
Albacore	0	0	0	ì	63	64		
Yellowfin	0	o	0	2	133	135		
tuna Bigeye	0	o	0	•	29	29		
tuna Bluefin	0 .	0	0	0	0	0		
tuna Skipjack tuna	0	o .	0	•	O	0		
Total tunas	0	o	0	3	225	228		
	11.4.4	v.	Annual	catch ²				
Blue	0	0	0	*	2	, 2		
marlin Striped	o	0	o	0	•	, •		
marlin \$wordfish	0	0	0	0	1			
Black	0	0	•	0	0	. 0		
marlin Spearfish & sallfish	0	0	0	0	0	0		
Total billfishes	0	0	0		3	3		

T.

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 65.--Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1972.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota	
		М	onthly nomi	inal effo	rt¹ .		
anuary	0	0	0	0	7	7	
ebruary	- 0	. 0	0	0	9	9	
larch	0	0	•	. 1	0	1	
pril	•	o .	0	3	. 17	20	
lay	0	0	. 0	0	22	22	
lune	0	0	0	. 0	10	10	
luty	0	. 0	0	0	t		
lugus t	ø	0	0	0	2	- 2	
September	0	0	0	0	o ·	0	
October	0	0	0	0	0 .	0	
lovember	0	0	0	. 0 ,	•	0	
December	0	0	0	0	•	. 0	
Total	0	0	0	4	68	72	
	Annual catch ²						
Albacore	0	0	0	1.	27	28	
Yellowfin	0	0	0	4	87	91	
i tuna Bigeya	0	0	0	1	23	24	
tuna Bluefin	0	• 0	. 0	0	•	•	
tuna Skipjack tuna	0	•	0	0	0	O	
Total tunas	0	0	0	6	1 37	143	
			Annue	l catch ²		•	
Blue	0	0	• 0	0	2	4	
marlin Striped	0	•	0	0	•	•	
marlin Swordfish	0	0	0	0	•	•	
Black	· •	0	•	• • •	•	1	
merlin Speerfish & seilfish	•	•	0		0	•	
Total billfishes	0	0	0	0	. 2		

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 66.--Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1973.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
		М	onthly nomi	nat effo	rt ¹	
January	0	0	0	0	3	3
February	0	• •	0	3	0	3
Merch	o	0	ø	0	2	. 2
April	0	0	. 0	0	0	0
May	0	0	. 0	0	Ο.	0
June	0	0	· ó	0	0	o
July	0	0	0	0	o	0
August	0	0 -	• 0	0	0	o
September	0		0	o	0	. 0
October	0	0	0	. 0	ο,	0
November	0	0	0	0	O	0
December	0	0	0	o	0	0
Total	0	0	. 0	3 .	5 ′	8.
			Annual	catch ²		
Albacoré	0	o	0	2	i	3
Yellowfin	0	0	0	*	1	1
tuna Bigeye	0	0	0	1	2	. 3
tuna Bluefin	0	0	0	0	0	0
tuna Skipjack tuna	0	0	0	0	0	. 0
Total tunas	0	0	0	3	•	7
			Annua 1	catch ²		
Blue marlin	0	0 -	0	0	•	*
Striped	0	0	0	0	0	. 0
marlin Swordfish	0	0	•	0	0	. 0
Black	0	0	0	0	0	. 0
marlin Spearfish & sailfish	0	0 .	·· • • · · ·	0	0 + 120	. 0
Total billfishes	0	0	0	0	*.	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 67.--Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1974.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Total	
		М	onthly nomi	nal effo	rt ¹		
January	0	• 0	o ·	0	0	0	
February	0	0	0	2	0	2	
March	0	0	o	0	0	0	
April	0	o	0	. 0	0	0	
May	0	0	0	0	0	0	
June	. 0	. 0	• •	0	0	0	
July	0	0	Ø	0	0	0	
August	0	0 ·	0	0	5	5	
September	0	0	0	0	ø	0	
October .	0	0 .	0	0	o	0	
November	5	0	0	0 .	0	5	
December	42	0	0	0	0 -	42	
Total	47	0	0	2 .	5 .	54	
	Annual catch ²						
Albacore	32	0	0	•	•	32	
Yellowfin	• •	0	0	•	1	5	
tuna Bigeye	8	o	0	1	1	10	
tuna Bluefin	0	0	0	. 0	0	0	
tuna Skipjack tuna	0	. 0	0	0	0	0	
Total tunas	44	0	0	1	2	.47	
		Annual catch ²					
Blue marlin	•	0	•	0	0	•	
Striped mariin	ŧ	. 0	0	0	•	1	
mariin Swordfish	•	0	o	0	o	•	
Black merlin	0	o	0	0	0 -	0	
meriin Spearfish & sailfish	0	0	0	0	0	0	
Total billfishes	5	0	0	0	0	5	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 68.—Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1975.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Total		
		м	onthly nom	inal effo	rt ¹			
January	216	o	0	. 0	O	216		
February	49	0	0	1,	0	50		
March	0	0	0	0	0	0		
April	0 .	0	0	0	9	9		
May	0	• •	ø	o ,	6	6		
June	. 0	0	0	1	6	7		
July	0	0	0	0	1	1		
August	ø	O .	O	0	0	v ₀		
September	0	0	, o	0	0	0		
October	34	0	ø	 O	Ó	34		
November	108	0	o	0	0	108		
December	58	0	0	0	0	58		
fotal	465	0.	0	2	22	489		
	Annual catch ²							
Albacore	427	0	o		. 6	433		
Yellowfin	72	. 0	0	1 .	11	84		
tuna Bigeye	31	0	0	i	8	40		
tuna Bluefin	0	. 0	0	0	O	0		
tuna Skipjack tuna	0	ø	• 0	0	0	0		
Total tunas	530	0	0	2	25	557		
		Annual catch ²						
Blue	36	0	. 0	0		37		
marlin Striped	9	0	0	0	0	9		
mariin Swordfish	5	0	0 -	•	0	5		
Black	3	0	0	ø .	0	3		
marlin Spearfish & sailfish	2	o	0	0	0	2		
otal billfishes	55	0	0	•	1	56		

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 69.--Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1976.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
			onthly nomi	nal effor	·t¹	
January	0	0	O	ø	0	0
February	69	0	0	ø		69
March	147	0	0.	0	0	147
April -	0	0 .	0		17	17
Hay	0	0	. 0	.0	0	0
June	0	0	0	o	5	5
July	0	0	0	0	0	0
August	0	0	0	. 0	0	0
September	o	o	O	0	0	0
October	0	0	0	. 0	0	0
November	26	0	0	0	0	26
December	0	•	0	0	0	•
Total	242	0.	0	0	22 .	264
			Annual	catch ²		1
Albacore	210	0	0	. 0	8	218
Yellowfin	51	0	0	0	16	67
tuna Bigeye	15	•	0	o	•	19
tuna Bluefin	0 .	0	0	0	0	0
tuna Skipjack tuna :		0	0	0	0	4
Total tunes	280	0.	0	0	26	308
			- Annua 1	catch ²		
Blue	21	0	0	0	1	22
. merlin Striped	5	0	0	0	•	5
merlin Swordfish	•	0	0	0	٥	•
Black	0		0	0	0	•
merlin Spearfish & seilfish	109	0	0	•	1	110
Total billfishes	135	0	0	0	2	137

¹Effort in vessel days, * = < 1 vessel day.
²Catch in metric tons, * = < 1 mt.

Table 70.—Estimated catch and effort by longliners of Taiwan in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1977.

	Vake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
		М	onthly nomi	nal effo	rt ¹	
January	σ	1		. 0	38	. : 39
February	58	0	0	0	2	60
March	4	Ó	. *	. 3	o	. 7
April 1	0 ,	o ·	o	. 0	0	0
Hay	0	o	0	0	o	0
June	0	0	. 0	0	o	ø
July	o	0	o	. 0	0	o
August	Ó	0	0	0	•	*
September	0	0	o	0	: 0	0
October	0	o	0	3	o .	3
November	0	0	0	0	0 .	0
December	0	0	o	0	•	0
Total	62	ı	*	6	40	109
			Annua 1	catch ²		
Albacore	42	•	0	2	*	44
Yellowfin	5	•	•	1	53	59
tuna Bigeye	2	1	*	2	5 .	10
tuna Bluefin	0	0	O	*	0	*
tuna Skipjack tuna	• . :	.	0	0	0	•
Total tunas	49	1	•	5	58	113
,			Annual	catch ²		
Blue mariin	2	0	0	•	1 :	3
Striped mariin	1	•	O.	0	0	t
Swordfish	*	0 .	0	ò	•	•
Black	0	ø	0	0	0 .	0
mariin Spearfish & \$ailfish	•	0	0	o	o (*)	•
Total billfishes	3 ,	*	0	*	1	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 71. -- Estimated catch and effort by Japanese baitboats within 200, 100, and 50 miles of the Hawaiian Islands, 1972.

	Hawa 1	Main Ian Island	s (A)	Nawa i	orthwester Ian Island	n s (B)	Hawa i la	Total n Islands	(A + B)
-	200 ml.	100 mi.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 mi.	50 mt
				Monthl	y nominal	effort ¹	-	~ ~	<u>-</u>
January	0	0 .	. 0	0	0	0	•	0	0
February	o	0	0	. 0	0	0	0	0	0
March	o	. 0	0	0		0	0	o	0
April	0	0	0	0	0	; 0	0	o	
Hày	0	0	0	0	ó	0	O	•	. 0
June	O	•	0	0	0		0	0	. 0
July .	0	. 0	. 0	0	0	0	0	0	0
August	• 0	0	0	55	33	24	55	33	24
September	0	. 0	0	155	132	88	155	132	88
October	o	0	0	3	3	1	3 -	3	. 1
November	0	0	0	0	0	0	0	. 0	. 0
December	0	0	0	0	0	. 0	. 0	0	. •
Total	0	ø	0	213	168	EII	213	168	113
			,	,	Annual cat	ch²			
Albacore	0	0	0	26	0	0	26	0	ø
Yellowfin	. 0	0	0	19	3	3	19	3	3
tuna Bigeye	0	0	0	105	63	37	105	63	37
tuna Bluefin	10	0	0	26	8	5	26	6	. 5
tuna Skipjack tuna	. 0	0	0	1282	971	636	1282	971	636
Total tunas	0	0	0	1458	1045	681	1458	1045	681
		,		-	Annual cate	ch ²			
Frigate tune	oʻ	0	0	6	6	4	6	6	4
Others	. 0	0	0	31	31	22	31	31	22

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 72.--Estimated catch and effort by Japanese baitboats within 200, 100, and 50 miles of the Hawaiian Islands, 1973.

	Hawa I	Main ian islands	(A)		rthwester an Island		Havalla	Total n Islands	(A + B)
	200 ml.	100 ml.	50 ml.	200 mi.	100 ml.	50 m1,	200 ml.	100 ml.	50 ml
				Monthly	nominal	effort ¹			
January	0	o	0	0	. 0	, 0	. 0	o	. 0
February	0	0	0	0	o	•	0	o , .	0
March	0	. 0	o	0	0	0	· · · · o	o	0
Apr11	o	0	0	0	0	0	o	0	0
Мау	0	0	0	0	0	0	o	0	. 0
June	o	0	0	0	. 0	G	0	o	0
July	o	0	0	59	40	2.2	59	40	22
August	. 0	0	0	37	16	e	37	16	8
September	0	0	0	0	0	0	0	0	o
October	0	0	0	0	o	0	0	0	0
November	0	0	0	0	0	0	0	0	0
December	0	0	0	o	0	0	0	o	0
Total	0	0	0	96	56	30	96	56	30
				A	nnual cat	ch ²			
Albacore	0	0	0	0	0	0	0	0	0
Yellowfin	0	o	0	20	10	10	20	10	10
tuna Bigeye	0	0	0	109	80	43	109	80	43
tuna Bluefin	0	0	0	O	. 0	0	0	0	0
tuna Skipjack tuna	o	0	0	823	451	192	623	451	192
Total tunas	0	0	0	952	541	245	952	541	245
•				A	nnual cat	ch ²			
Frigate tune	o	0	0	. 0	0	0	0	9	0
Others	0.	0	0	12	11	7	12	11	7

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 73.—Estimated catch and effort by Japanese baitboats within 200, 100, and 50 miles of the Hawaiian Islands, 1974.

	Hawa I	Main ian islands	(A)		orthwester Ian Island		Hawa I I a	Total n Islands	(A + B)
	200 ml.	100 ml.	50 mi.	200 ml.	100 mf.	50 ml.	200 mi.	100 ml.	50 ml
				Monthly	nominal	effort ¹			
January	0	0	0	0	O	o	0	0	. 0
February	0	o ^r	0	. 0	0	0	. 0	o	. 0
Harch	o	0	o	0	0	0	0	. 0	. 0
April	0	0	0	o	0	0	0	o	. 0
Máy	ο΄	0	0		o	o	0	. 0	0
June	0	0	0	7	4	3	7	4	3
July	• 0	0	o	. 83	63	4.8	83	63	48
August	, · · t	1	t	86	68	38	87	69	39
September	0	. 0	0	10	7	5	10	7	5
October	0	0	0	0	0	0	0	o .	0
November	0	o	o	o	o	Ó.	0	0	· •
December	0	0	0	0	•	. 0	0	0 .	0
Total	1	· t	1	186	142	94	187	143	95
					Annual cat	ch²			
Albacore	0	o	0	0	ø	0	0	0	. 0
Yellowfin	0	0	0	50	48	36	50	48	36
tuna Bigeye	0	0	o	147	66	47	. 147	66	47
tuna Bluefin	0	0	0	•	*	•	*		•
tuna Skipjack tuna	0	0	0	1971	1593	1107	1971	1593	1107
Total tunas	0	0	0	2168	1707	1190	2168	1707	1190
					Annual cat	ch ²			
Frigate tuna	o	0	0	6	6	, 6	. 6	6	6
Others	0	0	0	19	16	1.1	19	16	11

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 74.--Estimated catch and effort by Japanese baitboats within 200, 100, and 50 miles of the Hawaiian Islands, 1975.

•	Hawa I	Main ian island	s (A)		orthwester Ian Island		Hawaii	Total on Islands	(A + B)
	200 ml.	100 m1.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml
				Monthl	y nominal	effort ¹			
January	0	ο.	o	o	o	0	0	0	0
February	0	o	0	0,	o	0	0	0	0
March	0	0	0	0	0	o	.0	Ó	0
April	0	0	0	1	0	10	1	0.	0
May	0	0	0	12	9	6	12	9	6
June	0	0	. 0	54	46	32	54	46	32
July	0	0	0	122	82	48	122	82	48
August	•	0	o	5 î	25		51	25	11
September	3	3	2	23	21	10	26	24	12
October	0	0	0	3	1	0	3	1	0
November '	0	0	. 0	o	0	0	0	0	. 0
December	0	0	0	0	. 0	. 0	0	0	0
Total	3	3	2	266	184	107	269	187	109
					Annual cat	ch²			
Albacore	0	0	0	89	89	27	89	89	27
Yellowfin	0	0	-0	167	155	80	167	155	80
tuna Bigoya	0	0	0	71	53	36	71	53	36
tuna Bluefin	0	0	o	25	25	. 8	25	25	6
tuna Skipjack tuna	0	0	0	1906	1301	804	1906	1301	804
Total tunas	0	0.	0	2258	1623	95 5	2258	1623	955
					Annual cat	ch ²			
Frigate tuna	0	0	o	1.1	11	7	1.1	11	. 7
Others	0	0	0	83	81	46	83	61	46

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 75.--Estimated catch and effort by Japanese baitboats within 200, 100, and 50 miles of the Hawaiian Islands, 1976.

•	Hawa i	Main Ian Island	s (A)		orthwester Ian Island		Hawa I I a	Total n Islands	(A + B)
	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	50 ml.	200 ml.	100 ml.	- 50 ml
				Month!	y nominal	effort ¹			
January	o	•	0	0	0 -	0	0	0	0
February	o	0	. 0	0.	•	0	0	0	0
March	o	0 .	0	0	0	0	0	0	, 0
Apr11	0	Ò	0	o	o	. 0	0	.0	0
Hay	o	0	0	. 1	*	0	ı	•	0
June	0	0	, O	82	62	35	82	62	35
July	22	10	5	409	354	208	431	364	213
August	29	23	4	97	85	49	126	tos	53
September	0	. 0	O	. 9	7	5	. 9	. 7	5
October	0	0	O	. 0	0	0	O	0	0
November :	o	o	0	0	0	0	ó	O	0
December	. 0	0	0	0	0	O	0	0	0
Total	51	33	9	598	508	297	649	541	306
					Annual ca	tch²			
Albacore	. •	0	. 0	0	0	0	0	0	0
Yellowfin	54	3	•	124	109	73	178	112	. 73
tuna Bigeye	89		o	92	76	43	181	76	43
tuna Bluefin	0	0	0	0	. 0	O	0	0	
tuna Skipjack tuna	315	242	56	4294	3847	2367	4609	4089	2423
Total tunas	458	245	56	4510	4032	2483	4 96 8	4277	2539
	,			,	Annual ca	tch ²			
Frigate tuna	0	o	Ö	9	. 0	5	9	8	5
Others	0	0	.0	28	27	13	28	27	13

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 76.--Estimated catch and effort by Japanese baitboats within 200, 100, and 50 miles of the Hawaiian Islands, 1977.

	Hawai	Main lan Island	s (A)	Hawa 1	lorthwester ian Island	n is (8)	Hawa i la	Total n Islands	(A + B)
	200 ml.	100 mi.	50 ml.	200 mi.	100 ml.	50 ml.	200 ml.	100 ml.	50 m
				Month 1	y nominal	effort ¹			
January	o ,	Ο,	0	0	0	o	0,	0	0
February	0	0	0	. 0	0	0	0	•	0
March _	0	0	0	0	0	. 0	0	0	0
April	0	0	. 0	20	16	9	20	16	9
May	0	0	0	14	13	10	14	13	10
June	32	17	12	409	258	165	441	275	177
July	14	10	2	208	65	27	222	75	29
August	6	t	*	36	26	15	42	27	15
September	0	0	0	17	7	4	17	7	4
October	0	0	o	11	5	3	11	5	3
November `	0	b	ø	0	•	· · · · · · · · · · · · · · · · · · ·	0		. 0
December	Ó	0	0	0	. 0	. 0	0	0	0
Total	52	28	14	715	390	233	767	418	247
					Annual cat	ch ²			
Albacore	0	0	0	49	2	0	49	2	0
Yellowfin	25	•	0	337	253	169	362	253	169
tuna Bigeye	91	1	0	734	654	497	825	655	497
tuna Bluefin	0	ó	0	0	0 .	•	0	0	0
tuna Skipjack tuna	281	153	29	4375	2339	1347	4656	2492	1376
Total tunes	397	154	29	5495	3248	2013	5892	3402	2042
					Annual cat	ch²	······································		
Frigate tuna	1	1	•	16	1,1	. 6	17	12	6
Others	0	0	0	108	99	68	108	99	86

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 77.--Estimated catch and effort by Japanese baitboats around Guam and the Northern Mariana Islands, 1970.

	Guam	(A)		hern nas (B)	Ard combined	eas I (A + B)
	Within 50 mi	Within FCZ	Within 50 mi.	Within FCZ	Within 50 ml.	Wİ thin FCZ
		Мог	othly nomi	nal effor	t 1	
January	. 1	13	3	38	4	51
February	, 0	50	. 8	28	8,,	48
March	5	71	12	52	14	123
April	2	.15	28	65	30	80
May	. *	, 4	14	35	14	39
June	0	0	, 9	53	9	. 53
July	,0	1	207	608	207	603
August	*	, 5	78	229	78	. 234
September	5.	28	101	207	106	235
October	. 0	4	21	54	21	58
November	1	14	41	292	42,	30 6
December	2	7	, 3	107	5	114
Total	13	182	525	1762	538	1 94 4
•			Annua	l catch ²		
Albacore	0	0	•	14		. 14
Yellowfin	•	16	54	414	54	430
tuna Bigeye	0	. •	35	153	35	153
tuna Bluefin	o	. 0	1	4	t	
tuna Skipjack tuna	28	649	2903	8284	2931	8933
Total tunas	28	665	2993	8969	3021	9534
, :		14.1	Annua	1 catch ²		
Frigate tuna	0	,0	. 0	0	1 0 4	. 0
Others	*	. •	. 3	13	3	13

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 78.--Estimated catch and effort by Japanese baitboats around Guam and the Northern Mariana Islands, 1971.

	Guam	(A)		thern nas (B)	Are combined	
	Within 50 ml.	Within FCZ	Within 50 mi.	Within FCZ	Within 50 ml.	Wi thin FCZ
		Мог	thly nom	inal effor	t ¹	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
January	. •	20	4	38	4	56.
February	•	24	20	74	20	98
March	2	14	- 14	66	16	80
April	0	1	t	7	1	8
May	0.	0	,0	8	0	8
June	0	0]	14	31	14	31
July	0	t	194	678	194	679
August	4	6	216	562	252	56 8
September	3	15	255	564	258	579
October	11	44	178	419	189	463
November	0	30	27	173	27	203
December	1	9	4	26	5	35
Total	51	164	929	2646	950	2810
			Annua	1 catch ²		
Albacore		0	0	2	0	2
Yellowfin	*	46	38	164	38	230
tuna Bigaya	0	.0	0	0	0	0
tuna Bluefin	0	0	0	12	0	12
tuna Sklpjack tuna	78	398	4454	12366	4532	12764
Total tunes	78	444	4492	12564	4570	13008
			Annua	l catch ²		
Frigate tune	0	0	*	•	•	•
Others	0	1	1	19	1	20

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 79.--Estimated catch and effort by Japanese baitboats around Guam and the Northern Mariana Islands, 1972.

	Guam	(A) .		hern as (B)	Ard comblined	(A + B)
	Within 50 mi.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 ml.	WithIn FCZ
		Мог	nthly nomi	inal effor	t¹	
January	1	•	5	17	6	21
ebruary	0	2	, 9	20	9	22
larch	•	2	10	28	10	30
April	o	2	12	47	12	49
Hay	1	, 1	3	. 6	4	9
June	0	0	97	299	97	299
July	3	10	251	527	254	537
August	9	18	188	487	197	505
September	9	17	47	116	56	133
October	2	12	14	45	16	57
November	16	31	10	46	26	77
December	6	19	*	8	6	27
Tota i	47	118	646	1648	693	1766
			Annua	1 catch2		
Albacore	3	13	23	52	26	65
Yellowfin	0	4	17	66	1.7	70
tuna Bigeye	0	ο,	4	16	4 *	16
tuna Bluefin	0	. 0	0	. 0	0	. 0
tuna Skipjack tuna	131	284	2885	6971	3016	7255
Total tunas	134	301	2929	7105	3063	7406
			Annu	al catch ²		
Frigate tuna	0	0	0		0	
Others	1	1		2	2	3

¹Effort in vessel days, * = < 1 vessel day. ²Catch in metric tons, * = < 1 mt.

Table 80.--Estimated catch and effort by Japanese baitboats around Guam and the Northern Mariana Islands, 1973.

	Guam	(A)		hern nas (B)	Are combined	
	Within 50 ml.	Within FCZ	Within 50 mi.	Within FCZ	Within 50 mi.	Wİ thin FCZ
		Moi	nthly nomi	nal effor	t¹	
January	0	2	0	13	0	15
February	•	2	3	18	3 -	20
March	o	8	6	73	6	8 i
April	0	6	7	32	7	38
May	0	0	4	14	•	14
June	0	o .	13	41	13	41
July	0	5	233	532	233	537
August	8	15	202	470	210	485
September	4	4	49	134	.53	138
October	0	1	16	54	16	55
November	1	2	64	140	65	142
December .	*	9	27	82	27	91
Total	13	54	624	1603	637	1657
			Annua 1	catch ²		
Albacore	0	0	9	111	9	11
Yellowfin tuna	7	10	36	258	43	258
Bigeye	. 0	1	0	6	0	7
Bluefin tuna	0	O	• 0	4	o	4
Skipjack tuna	78	223	3030	7099	3108	7322
Total tunas	85	234	3075	7378	3160	7612
			Annua I	catch ²		
Frigate tuna	0	0	0	0	0	0
Others	0	0	•	2	•	. 2

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 81. -- Estimated catch and effort by Japanese baitboats around Guam and the Northern Mariana Islands, 1974.

	Guam	. (A)		hern as (B)	Ard comblined	eas I (A + B)	
•	Within 50 mi.	Within FCZ	Within 50 mi.	Within FCZ	Within 50 ml.	Wİ thin FCZ	
		Мог	ithly nomi	inal effor	t ¹		
January		6	.26	34	26	ÅΟ	
February	0	3	15	74	15	77	
March	*	3	. 2	55	2	58	
April	0	3	20	45	20	48	
May	0	o	0	0	Ó	0	
June	o	ø	7	26	7	26	
July	5	11	195	556	200	567	
August	0	2	23	59	23	6 1	
September	3	17	63	127	66	144	
October	2	11	107	199	109	210	
November	1	8	39	138	40	146	
December	1 .	3	28	62	29	65	
Total	12	67	525	1375	537	1442	
			Annua	1 catch²			
Albacore	•	0	1	t	1	, 1	
Yellowfin tuna	0	7	101	294	101	30 1	
Bigeye tuna	0	o	o	0	ó	0	
Bluefin	0	0	0	0	0	0	
tuna Skipjack tuna	8	76	1798	4627	1806	4703	
Total tunas	8	83	1900	4922	1908	5005	
	Annual catch ²						
Frigate tuna	0	0	0	0	0	. 0	
Others	0	0	23	39.	23	. 39	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 82.—Estimated catch and effort by Japanese baitboats around Guam and the Northern Mariana Islands, 1975.

	Guar	n (A)		thern nas (B)	Areas combined (A + B)				
	Within 50 ml.	Vi thin FCZ	Within 50 ml.	Within FCZ	Within 50 mi.	VÍ thIn FCZ			
		Мо	nthly nom	inal effor	t ¹				
January	. 0	1	15	44	15	45			
February		3	22	36	23	39			
March	3	20	- 35	61	38	101			
April	4	21	66	137	70	158			
May	. 2	. 77	5	30	7	107			
June	t	9	188	391	189	400			
July	1	10	85	254	86	264			
August	•	8	132	260	132	268			
September	. 1	22	5 t	154	52	176			
October	*	8	4	56	4	64			
November		10	52	151	53	161			
December	1	17	38	102	39	119			
Total	15	206	693	1696	708	1902			
			Annua I	catch ²					
Albacore	0	0	0	4	ø	. 4			
Yellowfin tuna	. 0	9	82	271	82	280			
Bigeye tuna	•	t	2	6	2	7			
Bluefin tuna	0	. 0	0	Ó	0	0			
Skipjack tuna	68	1117	2867	6345	2935	7462			
Total tunes	68	1127	2951	6626	3019	7753			
,		Annual catch ²							
Frigate tuna	0	0	0	. 0	0 -	· o			
Others	0 1	3	16	31	16	34			

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 83. -- Estimated catch and effort by Japanese baitboats around Guam and the Northern Mariana Islands, 1976.

	Guam	(A)	Nort Marian	hern as (B)	Ard combined		
•	Within 50 mi.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 ml.	WithIn FCZ	
		Мог	nthly nomi	nal effor	t ¹		
January	0	6	22	78	22	84	
February	. •	S	7	30	7	32	
March	0	0	4	17	4	17	
April	•	9	0	14	•	23	
May	0	0	1	,6	1	6	
June	0	. 0	2	7	2	7	
July	1	5 ,	77	264	78	269	
August	0	0	25	76	25	76	
September	0	3	16	33	1,6	36	
October	2	3	11	35	13	38	
Hovember		1	6	122	. 6	123	
December	•	21	ı	62	1	83	
Total	3	50	172	744	175	794	
			Annua	1 catch ²			
Albacore	. 0	0	0	0	•	0	
Yellowfin tune	0	25	33	249	33	274	
Bigeye tuna	. 0	0	0	1	0	1	
Bluefin	0	. 0	0	•	. 0	•	
Skipjack tuna	9	85	563	2303	572	2368	
Total tunas	9	110	596	2553	605	2663	
,	Annual catch ²						
Frigate tuna	0	0	o	0	0	0	
Others	0		2	13	2	13	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 84.--Estimated catch and effort by Japanese baitboats around Guam and the Northern Mariana Islands, 1977.

	Guan	n (A)		thern nas (B)	Are combined	
	Within 50 ml.	Within FCZ	Within 50 ml.	Within FCZ	Within 50 ml.	WithIn FCZ
		Mor	nthly nomi	nal effor	t ¹	
January	O	0	*	32	•	32
February	0	0	45	167	45	167
March	16	227	· to	36	26	263
April	10	73	20	65	30	138
May	*	6,	0	2	•	8
June	0	2	55	172	55	174
July	0	t ,	52	150	52	15 i
August	*	5	25	107	25	112
September	. 1	2	16	99	17	101
October	0	2	8	70	8	72
November	. 0	13	11	170	11	183
December	0	2	i	39	1	41
Total	27	333	243	1109	270	1442
			Annua 1	catch ²		
Albacore	0	0	*	5	*	5
Yellowfin	o	13	63	431	63	44.4
tuna Bigeye	. 0	1	1	6	1	7
tuna Bluefin	0	1	0	8	0	9
tuna Skipjack tuna	94	2044	846	2995	940	5039
Total tunas	94	2059	910	3445	1004	5504
			Annual	catch ²		
Frigate tuna	0	O	0	0	0	0
Others	o	7	15	70	15	77

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 85.—Estimated catch and effort by Japanese baltboats in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1971.

	~ · Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota
	716 V. S. S. S. S.	s _{aba} a Mo	onthly nomi	nal effo	rt ¹	
January	, 0	0	0	0	0	0
February	. 0	0	0.1	0	.0 125	0
March -	0	0	. 0 ,	0	O 45	. 0
April	0	0	. 0 .	0	0	. 0
May	ę o	. 0	. 0	. 0	0 .	, rs = 0
June	, O	0	o	. 0	o .	0
July .	0	0	o d	0	o -	0
August	12	0	. 0	0	o 1,5,5,5,	12
September	. 0	0	. •	. 0	0	. 0
October	0	0	. 0	. 0	• • •	. 0
November	0	. 0	o	o	, 0 , ,	, o
December	. 0	0	, 0	. 0	0 . s. v.	. 0
Total	· 12	0	ø	. 0	0	12
	faces		Annual	catch ²		
Albacore	36	· o	. 0	. • . 0	Q ,	36
Yellowfin	· 0	0	. 0	0	0.,	0
tuna Bigeye	0	0	. 0	. 0	.0	. 0
tuna Bluefin	0	. 0	0	. 0	o . 1	. 0
tuna Skipjack tuna	, 409	. 0	· 0	0	O	409
Total tunas	445	, 0	0	.0	0	445
	1.15142 1 4.	· · · · · · · · · · · · · · · · · · ·	Annua 1	catch ²		,
Frigate tuna	0	0	. 0	. 0	, O , 20	O
Others	. 0	· 0	. 0	0	0	. 0

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 86.--Estimated catch and effort by Japanese baitboats in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1972.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Total	
·		Mo	onthly nom	inal effo	rt ¹		
January	0.	•	o ,	0	0	. 0	
February	0	0	, o	0	0	.0	
March -	0	Ó	0	0	0	0	
April	0	o ,	0	0	0	0	
May	0		· Q-	. 0	0	G	
June	3	0	·. o	0	0	. 3	
July	0	0,	0	0	0	0	
August	6	0	. 0	0	0	6	
September	32	2 .	o	. 0	. 0	34	
October	0	0	2	0	10	20	
November	9	0	0	.0	0	. 0	
December	0	0	0	0	0	0	
Total	41	2	5	0	16	63	
			Annual	catch ²			
Albacore	169	. 0	2	0,	147	318	
Yellowfin	, 0	. Q	• o ,	0	•	0	
tuna Bigeye	0	0	0	0	O	0	
tuna Bluefin	o i	O	0	0		•	
tuna Skipjack tuna	1 093	57	59	0	567	1776	
Total tunes	1 262	57	61	0 .	714	2094	
	Annual catch ²						
Frigate tune	0	0	3	0	Á	.7	
Others	0	0	o .	0	0		

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 87.--Estimated catch and effort by Japanese baitboats in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1973.

	Vake -	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota	
	* .	Мс	onthly nom	inal effo	rt ¹		
January	0	0	0	0	0	0	
February	· t	0	0	0	0	.1	
March	0	0	•	0	0	0	
April	0	0		0	0	0	
May	•	0	0	0	0	0	
June	.0	0	0	0	0	0	
July	41	0	0	0	0	41	
August	52	•	0	0	0	5 2	
September	7	ø	0	0	0	7	
October	4	. 0	•	0	0	` 4	
November	0	0	0	0	. 0	0	
December	, O =	0	0	σ.	. 0	0	
Total	105	0	. 0	0	0	105	
	Annual catch ²						
Albacore	578	0	. 0	o	0	.578	
Yellowfin	0	0	• •	0	0	0	
tuna Bigeye	0	ø	0	0	.0	. 0	
tuna : Bluefin	0	0	0	0	o	. 0	
tuna Skipjack tuna	2773	0		0		2773	
Total tunas	3351	o	0	0	0 .	3351	
			Annua	1 catch ²			
Frigate tuna	0	0	0 ,	.0	0	. 0	
Others	0		0 "	0	0	0	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 88.--Estimated catch and effort by Japanese baitboats in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1974.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Total	
		Мо	onthly nom	inal effo	rt ¹		
January	.0	0	0	. 0	. 0	0	
February	0	0.	o	0	0	.0	
March	0	. 0	0	o	0	0	
April	0	. 0	0	ø	0	0	
May	. *	0	o	; O	0		
June	1	0	0	0	٥	1	
July	67	0	o	0	0	67	
August	6	0	o	0	0	6	
September	1	. 2	o	0	O ,	•	
October	0	0	o	0	0		
November	0	0	10	0	t	1,1	
December	0	0	0	0	0	0	
Total	75	2	10	0	1	8.8	
			Annua1	catch ²			
Albacore	210	0	80	0	•	290	
Yellowfin	0	0	o	0	0	0	
tuna Bigeye	0	0	. 0	0	0	0	
tuna Bluefin	•	0	1	0	0	1.	
tuna Skipjack tuna	1 653	64	282	0	29	2220	
Total tunas	2063	64	363	0	29	2519	
•	Annual catch ²						
Frigate tuna	0	0	0	0	. 0	. •	
Others:	0	0	0 -	0	0 .	0	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 89.--Estimated catch and effort by Japanese baitboats in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1975.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland Baker		
		Мс	onthly nom	inal effo	rt ¹		
January	0 -	0	0	0	2	2	
February	0	0.	1 2	0	2	1.4	
March	19	0	8	o	o	27	
April	168	0	0	0	o	168	
May	: 0	0	0	0	0	0	
June	23	, o	0	0	0	23	
July	205	2	0	0	0	207	
August	37	2	6	o	0	45	
September	15	o	o	0	4,	19	
October	31	o	0	. 0		`31	
November	2	0	0	0	0	2	
December	1	o	0	0	0	1	
Total	501	4	26	0	8	539	
			Annual	catch ²			
Albacore	2534	. *	172	0	0	2706	
Yellowfin	. 0	0	0	o	0	0	
tuna Bigeye	0	0	0	0	0	0	
tuna Bluefin	•	0	3	0	0	. 3	
tuna Skipjack tuna	12321	1,03	719	0	194	13337	
Total tunas	14855	103	894	0	194	16046	
	Annual catch ²						
Frigate tuna	2	0	0	0	0	2	
Others	0	0	. 0	0	0	. 0	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 90.--Estimated catch and effort by Japanese baitboats in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1976.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland- Baker	Tota	
		Mo	onthly nom	inal effo	ort ¹		
January	1	o ,	o	0	0	1	
February	0	0	o	0	o	0	
March	1	0	0	0	o	1	
April	0	0	0	0	0	0	
May	1	o	o	0	0	ı	
June	ì	0	o	0	0	. 1	
July	82	3	0	0	0	85	
August	27	2	17	0	0	4.6	
September	5	o	6	1	71	a 3	
October	3	0	0	0	8	1 1	
November	1	. 0	0	0	0	1	
December	0	0	o	0	2	2	
Total	122	5	23	1	81	235	
		•	Annual	catch ²			
Albacore	406	2	190	8	808	1414	
Yellowfin	0	0	0	0	0	0	
tuna Bigeye	0	0 -	o	0	0		
tuna Bluefin	4	0	2	0	3	9	
tuna Skipjack tuna	2984	112	563	27	2069	5755	
Total tunas	3394	114	755	35	2880	7178	
	Annual catch ²						
Frigate tuna	1	0	*	0	0	• •	
Others	0	0	0	0	0	o	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.

Table 91.—Estimated catch and effort by Japanese baitboats in the FCZ around Wake Island, Johnston Atoll, Palmyra Island and Kingman Reef, Jarvis Island, and Howland and Baker Islands, 1977.

	Wake	Johnston	Palmyra- Kingman	Jarvis	Howland Baker	Tota	
	,	Mc	onthly nom	inal effo	rt ¹		
January	. 0	0	0	0	0	0	
February	•,	0	0	0	4		
March	0	0	0	0	3	3	
April	0	. 0	0	0	0	0	
May	0	o	0	0	0	, 0	
June	261	11	, 1	0	0	273	
July	66	1113	0	0	0	179	
August	70	20	5	0	47	142	
September	5	6	109	0	16	136	
October	3.	5	132	0	8	148	
November	20	0	25	0	•	45	
December	2	0	5	0	0	7	
Total	427	155	277	0	78	937	
			Annual	catch ²			
Albacore	2326	1 092	2494	0	600	6512	
Yellowfin	0	0	• 0	0	o	0	
tune Bigeye	0	0	0	0	. 0	0	
tuna Bluefin tuna	5	. 8	34	0	0	47	
Skipjack tune	11570	4376	7330	0	2134	25410	
Total tunes	13901	5476	9858	0	2734	31969	
	Annual catch ²						
Frigate tune	2	6	39	0	0	47	
Others	0	0	0 -	0	0	0	

¹Effort in vessel days, * = < 1 vessel day.

²Catch in metric tons, * = < 1 mt.